International environmental politics – a regulatory leash?

A logistic regression approach to assessing the influence of business actors in international environmental regimes

Kari Christensen Nordby

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Department of Political Science

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Abstract

In this thesis I have studied the influence of business actors in international environmental regimes. I argued that business actors have incentives to attempt to influence because they are target groups, and that they will most likely be able to succeed in this endeavor due to their central role in the implementation stage. The research question is formulated as: *To what extent does the involvement and position of business actors in international environmental regimes affect the outcome of the regime?*

I investigated the research question by modeling influence as successful attempts to change the direction of international environmental regimes. I measured the correlation between (i) to what degree the business actors are involved and (ii) the direction they try to pull the regime in, and the outcome of the regime as the dependent variable, defined as (iii) compliance and (iv) regime effectiveness. This model enabled me to suggest that the probability of success in terms of behavioral change decreases if the business actors oppose the regime.

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All the remaining errors are mine only.

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1 Introduction

1.1 Why study business actors in international environmental regimes?

It is by now well established that state actors are not the only actors in global politics (Nye and Keohane 1971). Changes in the international economic system have given environmentalism a new taste for business actors (Porter and Linde 1995; Vogel 1997). A common assumption is that business and industry opposes regulation because it represents a risk of profit reduction and economic loss. However, studies have shown that in certain cases they do the opposite (Vormedal 2008). In fact, this can be characterized as a change in business strategies (Hoffman 1997).

Theories on international environmental regimes are sometimes criticized for being state-centric and for not taking into account the context in which the regimes operate (Levy and Newell 2005). These theories focus on regime formation and, more recently, regime effectiveness[1] (Breitmeier, Young, and Zurn 2006; Miles et al. 2002; Underdal 1992). A central concern in the literature focusing on regime effectiveness is identifying important variables for a successful outcome. There is a growing concern that non-state actors might be key determinants of the success of environmental protection efforts. Particular concern is directed towards business and industry actors (BI), who can be said to hold the key to behavioral change on the ground (Breitmeier, Young, and Zurn 2006; Falkner 2010; Levy and Newell 2005).

Not only might business actors determine the outcome of international efforts, they are increasingly putting efforts into influencing this arena (Betsill and Corell 2008). Lobbying on the national level is well documented, but less documented is the effect this lobbying can have on international negotiations (Falkner 2008).

This thesis investigates the role of business actors in international environmental regimes. More specifically, it will focus on the potential influence exerted by the business actors. I will

[1] The term regime effectiveness will be defined later on; for now it suffices to say that it refers to the outcome of a regime or a cooperation effort. The ”success” of a regime is a term sometimes used to express to what extent the cooperation effort succeed in governing.

model influence as successful attempts to change the direction of international environmental policy processes. An important step will be to measure the correlation between business attitudes towards international environmental regimes and the outcome of the same regimes.

The research question is formulated as follows:

To what extent does the involvement and position of business actors in international environmental regimes affect the outcome of the regime?

1.2 Introducing business actors and narrowing the scope

Since Michael Porter (1995) concluded that environmentalism is necessarily not the opposite of competitiveness, a growing amount of research has been dedicated to the role of business actors in international environmental politics (Hoffman 1997; Levy and Newell 2005; Nowell 1996).

The increasing observations of influential business actors on the international arena have however yet to be followed by a consensual theoretical development. The well established theories of International Relations (IR) and International Political Economy (IPE) fall short in analyzing global environmental governance as of today, according to Levy and Newell (2005:21-23).

Regime theory is the most common strand of IR focusing on environmental issues, but it fails to address the increasing role of business and corporate strategies (Levy and Newell 2005). This is a state-centric approach and does not analyze business actors as proper actors, nor has it addressed the presence of business actors in the negotiation process.

On the other hand, IPE literature places state-market relations at the core of its analysis. It has, however, to a lesser extent focused on environmental issues (Levy and Newell 2005).

To fill this seeming gap in the research field, Levy and Newell introduce what they call a neo-gramscian approach to studying business in environmental governance (Levy and Newell 2005). The neo-gramscian approach states that capitalist forces seek alliances with state and civil society actors in order to change the hegemonic order. The approach addresses relationships between national and international levels of analysis, between states and non-state actors, and between agency and structural relations of power.

One strand of literature focuses on purely private governance initiatives (Auld, Gulbrandsen, and McDermott 2008). The Forest Stewardship Council is a prominent example of more or less successful private governance where state-led initiatives have failed. The mechanisms that make these governance efforts work is the *purchase choice;* they rely on consumer willingness to pay a little extra for green conscience (O'Neill 2009). However, private firms alone do not have the coercive power to impose regulations targeting all firms equally.

The thesis will take the starting point in literature focusing directly on the influence of business actors in international environmental politics (Betsill and Corell 2008; DeSombre 2000; Falkner 2008; Vormedal 2008). The theoretical framework will be developed with assumptions from this literature. It will in particular be distinguished between *pushers*, *laggards* and *neutrals*. These concepts are borrowed from the International Regime Database (IRD) (Breitmeier, Young, and Zurn 2006), and they are similar in content to *green* and *grey* business and industry non-governmental organizations (BINGOs) (Vormedal 2008). The color green is here refers to the perception of an environmental actor as "green", whereas the opposite, the "grey", refers to an actor who pollutes.

Pushers are green business actors, i.e. business actors who support international environmental regulations. There can be different reasons why pushers support regulations, some considers it a business opportunity and others are seeking level playing fields (Vormedal 2008). Laggards are reactionary, grey business actors who oppose regulations because they are perceived to be too costly and reduce competitiveness (Vogel 1997). Neutrals are actors who are neither pushers nor laggards, but that adopt intermediate positions (Breitmeier, Young, and Zurn 2006).

A business or industry actor will in this context be understood as an actor who represents a profit maximizing interest, in the sense that the actor first and foremost aims to secure the survival of the business in a market. I will not distinguish between business actors and industry actors.[2] The position they adapt in the negotiations is assumed to be in line with their business strategies (Vormedal 2010).

[2] The terms refer to the same category of actors. However, there are some differences in the everyday expressions. Industry is associated with what they do. Business is associated with how they do it.

1.3 The unit of analysis

International environmental politics can be studied through the theoretical construct of regimes. International regimes can be perceived as efforts of international cooperation that attempt to govern international issues. The three concepts of international cooperation, regimes, and governance are however used somewhat interchangeably in the literature, and this section will briefly explore the links between them.

The most widely used definition of international regimes is Krasner's definition (1983). "International regimes are defined as principles, norms, rules and decision-making procedures around which actor expectations converge in a given issue-area." The definition is not specifically formulated for environmental issues, rather it is meant to cover regimes facilitating liberal trade. This is generally not seen as a hinder for applying it to environmental regimes.

Regimes can be seen as an operationalization of the concept of international cooperation. Regimes are attempts at establishing bodies for decision-making, in order to overcome the problem of anarchy on the international arena.

Conceptually *governance* is a broader term. Levy and Newell (2005:2-3) reject the term regime and defines *environmental governance* as "…the broad range of political, economic, and social structures and processes that shape and constrain actors' behavior towards the environment. Environmental *governance thus refers to the multiple channels through which human impacts on the natural environment are ordered and regulated.* It implies rule creation, institution-building, and monitoring and enforcement. But it also implies a soft infrastructure of norms, expectations, and social understandings of acceptable behavior towards the environment, in processes that engage the participation of a broad range of stakeholders" (Levy and Newell 2005:2-3), my italics.

They suggest this definition of governance in the context of introducing non-state actors. Thus, you would expect it to be different from the consensus definition of regime.

Even though Levy and Newell reject the term regime, their definition of governance is quite similar in content to Krasner's definition of regimes. An important difference, however, apart from the distinction made for environmental issue-areas, is the sentence focusing on multiple channels (2005). Regimes are thus assumed to be only one of these multiple channels.

The two notions of cooperation and governance play on different aspects of the phenomenon international regime. Cooperation refers to the part of regime that concerns state interaction and the challenges related to overcoming national sovereignty. Governance refers to the part of the regime that concerns exercising authority and policy-making.

1.4 Research design

The unit of analysis in this thesis is international environmental regimes. The dependent variable is the outcome of the regime, in terms of both compliance and regime effectiveness. Business actors will be analyzed as an independent variable that might affect the outcome of a regime.

More specifically, business actors' *involvement* and *position* in the formation of a regime[3] will be studied. These two constructs will constitute the main independent variables in the analysis. They will appear both as dummies and as indexes. Involvement refers to their participation, and measures their degree of involvement as a continuum from low to high involvement according to where in the negotiation process they appear. The closer to decision-makers, the higher the degree of involvement. Position refers to their attitudes and business strategies as a continuum from support to opposition.

The two dependent variables are *compliance* and *regime effectiveness*. The two variables are similar, and both attempt to capture the outcome of a regime. They are however too different to merge. Compliance is associated with the performance of the states, whereas regime effectiveness is associated with the actual behavioral change.

In addition to what can be termed the "business influence model", a set of control variables will be included. These control variables can be termed the "basic model", because they have traditionally had some explanatory power on the dependent variables. These are *rule depth, problem malignancy, uncertainty* and *decision rule.*

The data used in this thesis have been retrieved in two steps. The starting point was a dataset prepared for the study of Breitmeier, Underdal and Young (2009). I will henceforth refer to this as BUY. This dataset is based on the International Regime Database (IRD) (Breitmeier,

[3] I will use the terms *formation of regime* and *negotiations* interchangeably throughout the thesis.

Young, and Zurn 2006). This dataset included all the variables except *business involvement* and *business position.* These two variables were created specifically for this study.

I combine two multivariate techniques, namely logistic regression and partial correlations. The main analysis will be drawn from the logistic regression, and the partial correlations will be used to control the results in the logistic regression. I analyze the data stepwise. I first analyze the basic model in order to have a benchmark. I then introduce the business influence variables step by step.

1.5 The findings

One of the most important findings is that the position of business actors in the formation of regimes can be seen as a manifestation of the feasibility of the regime, and that business behavior is often the same before and after the regime is established, indicating that the regime does not change the course of action.

I suggest that this finding can be viewed as a case of a weak regulatory capture, or a regulatory "leash". Business actors can be said to have the power to block policy processes because they are in control of the implementation stage, indicating that the regulatory power of the states might not be absolute. Business actors do not however have complete control over the agenda-setting stage, given that many environmental problems do reach the scene and generate policy processes.

The findings support theories developed on the basis of case studies suggesting that business and industry actors are pivotal actors in the field of international environmental politics. Specifically, it serves to support and nuance Falkner's argument that business actors set the parameters for what is politically feasible, and that corporate responds have an important impact on the effectiveness of international regimes.

A counter-intuitive finding is that compliance and regime effectiveness is negatively correlated, and this is also reproduced in every correlation with the business variables. It is suggested that this correlation can be interpreted as an expression of the difference between shallow and deep agreements, but the interpretations are inconclusive.

1.6 Outline

In chapter 2 I present the theoretical framework. I start with asking the question of why we expect that business actors have influence in international environmental regimes. I also introduce the concept of regulatory capture. Furthermore I discuss in which direction they would pull the regime, looking at different roads to business position.

Chapter 3 starts with developing a model for studying the influence of business actors in international environmental regimes empirically. I start with a definition of influence, and arrive at a model with two business related constructs and two outcome related constructs. The brother part of the chapter is devoted to operationalizations of these constructs, before I finish the chapter with methodological concerns and descriptive statistics.

In chapter 4 I present the empirical results and suggest some possible interpretations. I will present both the logistic regression and the partial correlations, and the explained variance and the basic model will also be discussed. The two dependent variables will be compared.

Chapter 5 provides concluding remarks.

2 Theoretical approaches

2.1 Introduction

In this chapter I will present the theoretical framework for assessing the influence of business actors in international environmental regimes. I will argue that business actors have the ability to rise to the occasion and exert influence beyond their lobbying clout, and this is the most fundamental hypothesis in the thesis.

In order to distinguish business actors from other interest groups it is useful to think of the business actors as target groups (Skodvin, Gullberg, and Aakre 2010). As such the business actors play a double role in international environmental governance. They are not only interest groups lobbying for a higher moral standard; they are the subjects of regulation. In order to change an environmental problem it is in most cases business and industry that has to change behavior. The premises for the operations of these actors are dependent on the outcome of negotiations. Thus they have a motivation for trying to influence and control the development of new regulations. One response to the potential emergence of new regulations is to lobby the negotiations that lead to the formation of a regime.

In section 2.2 I show why we can expect business influence in international environmental regimes. I do so by describing the sources of business influence, relational and structural power, and I introduce the concept of regulatory capture. In section 2.3 I show how business and industry actors can be understood as target groups. More specifically, I describe how the effects of potential regulations are different across the universe of business actors, and how that will affect the direction the business actors will try to pull the regime in.

2.2 Why expect business influence in environmental regimes?

In this section I will present the arguments for expecting business influence in international environmental regimes.

Business actors possess knowledge and expertise about what is technologically possible at the time being. They are more capable of making a sound cost calculation than the decision-makers. The decision-makers are thus dependent on getting information about the actual

situation on the field that is going to be regulated from the actors who are being regulated. The expertise and informational power possessed by business actors gives them a potential to influence the politics in the direction that is good for their business. This kind of power is termed *relational power*.

The study of relational power is the traditional approach in empirical studies of non-state influence. It is usually assumed to rest on financial or informational resources. In the realm of business influence the relational power can be investigated through policy outcomes (Falkner 2008:19).

Target groups often have expert knowledge needed by the decision-makers to optimize policy outcomes (Skodvin, Gullberg, and Aakre 2010). What they specifically have expertise about is the process of implementation, the time frame, the constraints from technology and the cost of changing production.

One theoretical approach believes that the influence of business actors will increase when they ally with environmentalists (DeSombre 2000). The basic idea is that business' support for environmental regulations serves to enhance the business' credibility. This legitimacy will give them greater influence on government officials. To understand why business would support regulations constraining their behavior, let us look at the Ozone case in some detail.

In 1978 chlorofluorocarbons (CFSs) were prohibited in the United States, for nonessential aerosols, goods, drugs and medical or cosmetic products. This was before the Protocol entered into force in 1982. The US industry could have been hurt by national regulations, because it competed on the international market, against companies with lower, unregulated production costs. Instead, they adjusted and developed new technology. When US industry already had developed the new technology, they had a strong incentive to push for international regulation (DeSombre 2000).

To be sure, business support for environmental regulations stems from the search for profit and not moral conviction. However, in supporting environmental regulations, business actors jump in bed with the environmentalists, creating a Baptists and bootleggers coalition (DeSombre 2000). This coalition gives business a newborn legitimacy. The credibility with decision-makers will increase when business actors present themselves as solution-providers to a politically defined problem. This will in turn make governments listen to business advice

and actively include corporate actors in the international political process, as was the case in Ozone depletion (Falkner 2005:129).

On the other hand, Falkner argue, the greening of business actors does not automatically give the business actors increased leverage (Falkner 2008). The business group may have divergent interests due to the differentiated effects international regulations might have (Falkner 2001:162). The fragmentation of the business community is a central determinant, negatively, of corporate influence in foreign policy (Falkner 2001:160). Such fragmentation can arise when international regulation creates competition advantage for some firms and an increase in production costs for others. Conflict lines can be found between national and international firms, market leaders and laggards and producers and industrial users (Falkner 2001:162-163).

If the business group is fragmented, it will achieve less than if it is united. The fact that some firms support regulations and others do not can decrease the overall influence of business. This leads to the opposite implication than the one derived from deSombre; unless all firms decide to be supportive of regulations, which is unrealistic at this point in history, any partial, fragmented greening of business will reduce influence.

In this thesis the empirical reference point for business involvement is business associations. An implication is that business associations that are general and therefore have to pursue lowest common denominator (like the International Chamber of Commerce). In this line of reasoning business and industry actors studied in this thesis will achieve little.

"What is it that you want and how can we achieve that?"[4]

Business and industry is believed to have such a central position in the economy that they can control policy processes that will affect them. Policy-makers have to consider the broader economic impact environmental policies will have, and it is here that the business actors can set the parameters for what is politically feasible. This is referred to as *structural power* and is assumed to originate in the fact that they have control over the implementation phase of the regime.

[4] The citation is from Vormedal (2008:51) and was said to a business man by a delegate during one of the negotiations in the Climate Change regime.

"Corporations thus shape the outcome of international regime-building efforts indirectly at the implementation stage, by producing political and technological feedback mechanisms that enhance or limit the effectiveness of regimes." (Falkner 2008, :9).

Business actors are a necessary part of the solution to environmental problems and the actual execution of the implementation happens in the hands of business and industry actors. When a state decides to cut emissions, it is the industry that will change production. The structuralists argue that "[business'] consent is needed if profound changes to the working of the global economy are to be achieved through international regulation." (Falkner 2010:101).

A special form of structural power is *technological power* and comes from the fact that business actors control decisions on investment and technological innovation (Falkner 2010:114). The Montreal Protocol serves to exemplify this kind of power as well, because DuPont did turn the premises for international negotiations up side down by developing the technology needed to substitute the CFCs (Barrett 2006; DeSombre 2000; Falkner 2005).

Another form of structural power is *regulatory capture* (Falkner 2008:9). The concept is part of a theory labeled "economics of regulation", which is mainly associated with the economist George Stigler (1971), but also with Mancur Olson (1965) and Richard Posner (1974). The theory was developed as a reaction to public interest theories of regulation, which "holds that regulation is supplied in response to the demand of the public for the correction of inefficient or inequitable market practices" (Posner 1974:335). This is in many ways the conventional economic way to think of environmental regimes; a tool to deal with market failures that harm the environment, such as the economic externality of pollution (Concha 2006). In opposition to this view, the regulatory capture theory holds that "…*regulation is supplied in response to the demands of interest groups struggling among themselves to maximize the incomes of their members*." (Posner 1974:335). Environmental regulation is in this line of thought would then be maximizing the interests of business actors.

The idea of regulatory capture puts the discussion of business influence in a different perspective. Instead of viewing business actors as lobbyists with extra influence or target groups, they might "own" the regulation process more fundamentally. There are two possible implications of this theory. In the first scenario, the chain of events would be turned up side down; we could view the whole negotiation process as a result of a regulatory capture. One or more firms see the opportunity to develop new markets and thus push decision-makers to start

the negotiation process for an international agreement that would facilitate this market. In a way, this is what happened in the Ozone regime, except that regulations first were introduced on the domestic level against DuPont's will.

The second scenario is assuming a weak regulatory capture, or a *regulatory "leash"*. In this scenario the business actors are not the initiators of the process, but they are keeping the regulations close to their preferences. Business has not been able to keep environmental issues off the agenda altogether, which is an indicator that they do not control the whole process (Falkner 2008). The decision-makers recognize the problem and define it as a political problem, and so far business actors have had no important role. But when it is defined as a political problem and a policy process is initiated, the business actors might attempt to influence this process and be successful because they control the implementation process.

According to Perman "…to the extent it does take place, regulatory capture partly involves influence at the policy- or law-making stage, and partly in the processes by which laws are implemented and administered." (Perman 2011:247). Here it is specified how regulatory capture might come about; it involves influence at the negotiation stage and influence at the stage of implementation. As such, it can be said to involve both relational power and structural power.

2.3 In which direction do they pull the regime?

If business actors have influence in international environmental politics, which direction will they pull the regime in? The default assumption is that they block environmental regulations because they represent a cost and loss of competitiveness. This might not be the whole truth. In the following I will argue that business actors not always play against the environment. More specifically, I will show how the position of a business actor is dependent on each business' specific situation and how the proposed regulatory framework will work on their operation. For some business actors it can be profitable to act environmentally friendly.

Different regulations will have different effect on different kinds of business actors. The way in which the regulations "hit" them will determine how they will respond (Falkner 2008).

Laggard position is generated when compliance with provisions is perceived to be costly and when the provisions do not fit their taste.[5] (Vormedal 2008) Global Climate Coalition is an example of an oppositional business actor from the Climate Change Regime, which mainly represented the fossil-fuel industry.[6] In the Cartagena Protocol the industry actors were diversified, spanning from International Chamber of Commerce (ICC) to larger biotechnology companies such as Cargill and DuPont, and here the industry actors sought to narrow the mandate of the negotiations, but some also argued for harmonized regulatory framework (Burgiel 2008).

The category of *neutral* includes business actors who are not lobbying for or against regulations. Neutrals adapt a wait and see attitude, but are not necessarily passive. An example could be a large company who has large resources and that will be relatively less hurt by compliance costs. These actors are however not assumed to be pulling the regime in any direction (Breitmeier, Young, and Zurn 2006).

Pushers are actors that become advocates or leaders in the formation and implementation of regimes (Breitmeier, Young, and Zurn 2006). Pushers have reasons to support international environmental negotiations, and will thus end up arguing in the same direction in the negotiations.

One type of pushers view prospective regulations as a business opportunity and promote stringent regulation. These businesses would benefit from the new market established when the regulations are implemented, because they already have the technology and would be able to enter the market right away (Vormedal 2008).

The *market leader* might welcome new regulation because he knows that it would be difficult for his weaker competitors to comply (Falkner 2001:162-163). Market leaders can thus use regulatory politics to create new business models and achieve competitive advantage. Another opportunistic pusher is the *small, innovative businesses* that engage in new technology. These are not necessarily market leaders now, but might become one of the first in the newly established market in the aftermath of regulations. This has been observed in the EU; a tiny

[5] Incentives are more attractive to business actors than regulations for example (Mitnick 1980).

[6] Global Climate Coalition does no longer exist, disbanded in 2002 (Vormedal 2008)

Icelandic producer of methanol used as synthetic fuel for cars lobbied the EU in order to change the regulations in a direction that would help their business.[7]

Another type of pushers are those who prefer harmonization and level playing fields (Vormedal 2008). These are firms operating in international markets, as opposed who those who mainly operate in their home country (Falkner 2008). International firms that operate on different national markets are likely to prefer that all markets have the same regulations, because this kind of harmonization can reduce transaction costs from operating in multiple regulatory environments. When they operate on an international market they would also rather that there be an international agreement than a national legislation. National firms, on the other side, are likely to oppose international rule setting and prefer national trade barriers.

A third dimension is that large companies have more capital, are often better equipped with legal and environmental expertise and are more exposed and more vulnerable for campaigns. Small and medium sized enterprises (SMEs[8]) represent a high proportion of enterprises in industrialized economies, and they tend to have a higher level of environmental impact per unit (Gunningham and Sinclair 2002). Small businesses are more vulnerable to additional costs than are larger businesses and that suggest that they are prone to adapt a negative attitude.

A similar but slightly different source of business support, are those who already have been subject to domestic regulations (DeSombre 2000). An important source of international cooperation efforts where business plays a role is domestic environmental regulation that in turn has led firms to develop new technology and convinced their governments to pursue an internationalization of the regulation. Internationalization is defined "… as an official governmental attempt to gain adherence by other states to a level of environmental regulation similar to that in effect for the state in question on a particular issue." (DeSombre 2000:7). When the pusher attitude is expressed at the domestic level, studying participation in international negotiations will not capture this influence. However, this type of pushers are also participating and influencing the international level (Burgiel 2008; Vormedal 2008).

[7] The company argued that synthetic fuels should be treated equally as biofuels (Informal conversation with the manager).

[8] One definition of SME is a company that has less than 200 employees, butt his is not a consensus definition.

The ozone regime is in many instances referred to as the most clear-cut example of business influence. The impact of business and industry in this regime was treated by (Benedick, Fund, and Diplomacy 1998; DeSombre 2000; Falkner 2005). In this regime one large firm managed to turn the table, namely the famous DuPont. This was a unique example of technological opportunism. There are not many examples of technological opportunism in the universe of international environmental regimes besides the Ozone regime (DeSombre 2000). Furthermore, the US prohibited the use of CFCs for a range of products already in 1978, before the international agreement entered into force in 1982. By pushing internationalization they could level the playing fields and become leading firm in the new markets. DuPont saw an opportunity for becoming the market leader. They communicated to the US governors that they would readily invest in technology needed to achieve the domestic goals, *if* the US governors pushed for an international agreement (Barrett 2006; DeSombre 2000).

Some theorists expect that the most preferred channel for influence is the domestic. More specifically it is argued, "… business is likely to prefer acting at the national level where it enjoys well-charted and predictable channels of influence" (Levy and Egan in Vormedal 2008:36). Then there would be little influence on the international level.

International firms that have not been subject to domestic regulations are not necessarily pushers. They are most likely to be on the fence, at the same time preferring international regulations rather than special national regulations. Thus, a company that expects future regulations in the home country might want to support an international framework. An alternative strategy for these businesses could be to threaten to move their business elsewhere (Skodvin, Gullberg, and Aakre 2010).

2.4 Summary

To sum up, business actors are expected to have influence in international environmental policy processes. There are two sources of influence, relational power and structural power. Relational power is the power that is expressed through lobbying and expertise. Structural power is the power that is executed through control over the implementation process, where business actor can exert pressure beyond their lobbying clout. Regulatory capture is assumed to fathom the relational power and the structural power. Business actors will try to pull the regime in the direction that is suitable for their business, and that can be either pusher or laggard or neutral.

Expectations from the theoretical approach are as follows: (a) business actors will attempt to influence the formation of regimes through lobbying, (b) business actors will either be driving forces or blockers or in between, (c) the behavior of the states will change in the direction desired by the business actors.

3 Methodology

3.1 Introduction

The main question in this chapter is how I can go about to answer the research question empirically. As indicated in the introductory chapter I will develop a model with business involvement and business position as main independent variables, and I will measure the correlation with two measures of outcome, compliance and regime effectiveness. I will use the control variables as a baseline.

In the section 3.2 I will develop a model for studying the influence of business actors in international environmental regimes. In section 3.3 I will operationalize business involvement and business position, which will also include accounting for choices I made in transferring the variables to SPSS. In section 3.4 I will operationalize compliance and regime effectiveness and in section 3.5 I will operationalize the basic model. In section 3.6 I will account for how I have coded missing. Section 3.7 briefly considers methodological concerns that are not addressed underway, before section 3.8 will show the descriptive statistics for the business variables and the dependent variables.

3.2 A model for studying the influence of business actors

"Influence is defined here as the activities of actor A bringing about intended effects in the behavior of actor B." (Vormedal 2008:44). This definition includes both the influence attempt and the success of such an attempt, i.e. actual modification of one actor's behavior by that of another. Thus, influence is a two-dimensional concept (i) advocacy and lobbying and (ii) causing intended effects in the behavior of other actors.

According to the first part of the definition there has to be intentional communication from one actor to another. Intentional communication is the purpose of lobbying; "In international politics, lobbying state actors is the standard way for non-state actors to influence outcomes." (Falkner 2008:27-28). Business actors that lobby international environmental negotiations are thus the scope of empirical analysis. This suggests using an indicator that measures the *degree of involvement* in international environmental negotiations, i.e. regime formation.

Using a construct that measures the degree of involvement allows me to consider the closeness to the decision-makers. A business that sits in the hall might not have the same chance of succeeding with his influence attempt as a business actor that is invited to the table. Furthermore, observers in international negotiations are *present* in the negotiations, but they do not, as measured by the indicator, attempt to exert influence.

The definition says that influence does not occur unless the influence attempt has generated intended effects in the behavior of other actors. The actor B in this situation would be states. In order to assess influence, according to this definition, we would measure the effects in the behavior of the states, which in the scope of this thesis is the outcome of a regime. Intended effects could be a continuation and strengthening of the formation of the regime or a delay or even stop in the process.

We need to know whether the behavior of states is changed in the direction that is desired by the business actors. Even though business is communicating their interests to the decision-makers, we have no insurance that the outcome of the process reflects the interests of the business actors. Thus, we have to find a method of analysis that increases the likelihood that the observed business lobbying has actually led to behavioral change with the states.

To establish a causal relationship requires more than can be achieved through investigation of correlation. However, for causality to occur, probability is a necessary condition (Gerring 2005). The likelihood of a causal relationship between influence attempt and change in behavior increases if it can be shown that the behavior of the states has changed in the direction desired by the business actor.

If the business actors lobby for delaying or hindering the policy process and the behavior of states reflects this by having the character of less behavioral change than what would have occurred otherwise, it is likely that there has been a transfer of will. Transfer of will refers here to the operation that occurs when a business actor succeed in his influence attempt. This operation is perceived to be more than a transmission of information (Vormedal 2008:44), because the operation attempts to induce change in behavior.

Opposite, if business actors lobby for generating progress, and the behavior of states reflects this by having the character of more behavioral change than what would have occurred otherwise, it is likely that there has been a transfer of will. By saying that it is likely, I mean to say that it is *more likely* than if this correlation of events had not been present.

The yardstick for what would have occurred otherwise will here be thought of as the counterfactual that business did not intervene and the formation of the regime went on as usual. The drawback of using this yardstick is that we do not know what "as usual" entails, since successful regimes are dependent on a variety of factors, among them problem malignancy and uncertainty being exogenous factors that will vary from regime to regime. Despite the drawback, it does not make sense to measure a change from A to B not knowing whether A is in front of or behind B. For analytical purposes I will assume that the "as usual" scenario entails that the regime is actually formed and that behavior is changed to a moderate degree, so that there is room for both delay and progress. Without making this assumption, it does not make sense to say that business actors attempt to change the behavior of states.

This suggests using an indicator that measures the *position* business actors take in the negotiations. This dimension captures their strategic choices and the attitudes towards regulations. The relevant information according to the theoretical framework is whether they support regulations, oppose them, or adapt a wait-and-see attitude.

This suggests a model that takes on two indicators "degree of involvement" and "position". I will analyze these two dimensions individually because they are quite different in content and direction.[9]

Business actors can be represented in international negotiations as individual firms or as business associations. The latter is more common, at least in the Climate Change Regime (Vormedal 2008), but in the Ozone regime DuPont played solo. Business associations are general and therefore have to pursue lowest common denominator (like the International Chamber of Commerce). In the climate regime there has been implemented a requirement that all non-state actors be non-profit organizations (Vormedal 2008). This effectively reduces the amount of individual large firms and increases the number of BINGOs in that regime. Whether this type of requirement exists in other regimes is not clear, but the tendency is still the same; most of the business actors are associations of some kind.

[9] An alternative approach could be to merge them. The direction of these two dimensions might in some cases be similar, according to deSombre. The greener you are the greater credibility you have with the decision makers. This credibility could be translated into an invitation to sit closer to the decision makers. If this hypothesis was made an assumption, this assumption could give support to an approach of merging them. This approach will however not be taken.

To sum up, we need to know (a) whether the behavior of the targeted actor has changed in the direction desired by the influencer and (b) whether this change can be attributed – in whole or in part – to the influence attempt.

3.3 Operationalizations

Operationalization of concepts that are going to be relevant across many situations is bound to have a *general* character. This is especially true across the population of regimes, where the units differ in more than a few aspects. In some cases, all they have in common is being a cooperation effort, while they differ on policy area (although they are all environmental, this is not a homogenous category), participants, costs involved and solution type.

In this section I will explain how the variables have been constructed. The first variables (1.7.1-1.7.6) were already transferred to SPSS (IBM 1968) format by Breitmeier et al (2009), so for these variables I will indicate which query in the IRD they are based on and how they are coded in the BUY.[10] For the business variables (1.7.7-1.7.8) that I have transferred manually, I will provide a more extensive elaboration on the choices I made on the way.

A challenge here is that the information in the IRD is on two levels, but I only need one level. The information in IRD is structured in the following manner: Each unit (regime component) is listed with registered non-state actors, ”sub-units”. The information that I am looking for, position and involvement, is connected to these sub-units. My operation was to connect the information directly to the main units. I solve this by framing it so that each unit either has a BI (level 1) that plays one of the active roles (level 2), or it doesn’t. This dichotomy reduces the information, but for purposes of statistical analysis this is a necessary sacrifice.

3.3.1 Business position

Business position has three values.

- Pusher (supporting regime formation); 1=present, 0=not present
    - An actor that plays an active role in the political process; generates or promotes new ideas, knowledge, or policies; lobbies for political measures at the international level; and plays an advocacy role for regime formation
- Neutral; 1=present, 0=not present

[10] The full version of queries is provided in the appendix.

    - An actor adopting an intermediate position in between the pushers and the laggards, or an actor adopting a wait and see attitude.
- Laggard (opposing regime formation); 1=present, 0=not present
    - An actor that strongly opposes regime formation and lobbies against it. An extreme laggard may act as a politically active counterpart to extreme pushers and pushers in the regime formation process and may generate new ideas and promote concepts and knowledge to oppose regime formation.

In the IRD this construct is represented by question RF32; "106B For each of the important non-state actors identified in the pre-coding agreement, indicate whether that non-state actor was a pusher, a laggard, or neutral. Include other non-state actors if especially noteworthy."

The same principle is applied here as with the business role variable. In order to receive the score of 1 on the business position dummies, the regime component has to be listed with at least one business or industry actor, assigned with the position in point. For each regime component listed with one or more actors identified as a business or industry actor, it is determined which position the actor has with regards to supporting or opposing regulations.

3.3.1.1 vRF32 Dummies

Based on query RF32 in IRD I create three dummies, *RF32_push, RF32_neut, RF32_lagg.* The original variable has five values, including extreme pusher and extreme laggard. I do not expect this nuance to have an effect on the dependent variable. In political science we are generally more interested in the direction than the exact quantity of something, except from the situation where you expect a threshold effect, and this is not the case here. The most important feature is whether the business actor advocates for or against regulations or a wait and see attitude.

Since it is possible that a unit has more than one business actor, and thus also business actors advocating in both directions, I create dummies for this variable too.

A challenge that arises quickly is an ambiguity between the coders. In toscana unit 20601 and 10601 the coders have opposite opinions about the same BI, the first one coding it as a laggard and the second coding as a pusher. The same thing happens with toscana units 10029 and 20029, and 10701 and 20701. This is inevitable when gathering data like this and considering that it is only a few units it will not be corrected. There is also some ambiguity in

within the ozone regime, although not on the exact same unit and it might actually be the case that a BI changes its interests during the regime's life span.

An alternative to making dummies is to follow the same pattern of dividing them, but to give them values after how many pushers or laggards there are. Only one BI would give the unit a score of 1 and two or more BIs would give it a score of 2. Business associations might receive a 2 since it is representing more than one BI.

On the other hand the amount of actors is not likely to change anything on the dependent variable; DuPont for example turned the table on its own. Furthermore, in the data for the climate regime for example the actors per se are not pronounced, only the kind of actor (obstructionist business actors). And, given the characteristic of the database, such an indicator would not be especially trustworthy.

3.3.1.2 vRF32 Index

I also create an index based on RF32. The index has four values:

0=No business actors
1=Only laggards
2=Neutral or a combination of any of the three values
3=Only pushers

The index is thus going from business actors negative towards regime formation, to business actors positive towards regime formation. A positive relationship with the dependent variable will thus imply that "pushers" has a positive effect on regime effectiveness.

I refer to this variable throughout the paper as both attitude and position. I keep the term position here, in order to be clear about which query in the IRD I am referring to.

3.3.2 Business involvement

Business role is a set of dummies, with four values.
* Member of national delegation; 1=present, 0=not present
* Member of negotiation body; 1=present, 0=not present
* Exert pressure inside the negotiations; 1=present, 0=not present
* Exert pressure outside the negotiations; 1=present, 0=not present

"Present" entails that a regime component has a business or industry actor participating in the process as indicated by the four dummies. One does not exclude the other, so a regime component might score "present" on more than one role.

The two business variables are created specifically for this study, based on data material provided by the IRD.

In the IRD this construct is represented by question RF49; "109H What roles did non-state actors play in the negotiations?" The coding in the IRD is such that each regime component has a list of non-state actors in general, also including environmental NGOs (non governmental organizations) etc. that are all assigned with roles. In order to receive the score of 1 on the business role dummies, the regime component has to be listed with at least one business or industry actor, as identified in Appendix B, assigned with the role in point.

The variable is structured so as to say what role each of the identified non-state actors play. If the WWF has been identified as one of the non-state actors participant in the negotiation it is then listed in what ways the WWF has been taken part. The different ways to play a role are the following; Observe, Member of national delegation, Member of negotiation body, Exerted pressure inside the negotiations, Exerted pressure outside the negotiations. I will not use the Observer value because it is not relevant for the research question.

3.3.2.1 vRF49 Dummies

To create this variable I first make a cross tabulation of the Toscana values and the BusInd variable. Toscana values refer to the identification number in the original data set. BusInd variable refer to the variable created in the BUY dataset, which is based on RF31 in the original dataset. If a unit (toscanaID) is assigned any of the values 5, 6 or 7 in this query in IRD, it will receive a score of 1 in the BUY. This means that the BusInd variable indicates whether or not there are business or industry actors present in the negotiations; *present* not being further specified. In order to answer the research question in this thesis I will go on to further specify this variable; mainly on two levels: given that business actors are present, what is the degree of involvement in the negotiations? And secondly, regardless of degree of involvement; are they pushers, laggards or neutral?

When there is more than one business actor per unit, the strategy I will follow is to assign the dummies 1 in the case of *at least one BI in the category*.

I create a *dummy variable set* with the information contained in Negotiation_status (RF49). This query describes what role the non-state actor played in the negotiations in that particular regime component. I limit the information by only coding for the units that are registered as having multinational companies (MNCs) or national or international industry associations, i.e. business and industry actors. Thus, components that do not have any business or industry actors are left out, and the negotiation status for non-state actors such as Greenpeace, i.e. environmental NGOs (ENGOs) are not part of these variables. I have named the dummies *Member_national*, *Member_negotiation*, *Exert_inside*, *Exert_outside*.

In the coding I discovered some instances of inconsistency, which were treated in the following manner:

- If the unit is scored with BusInd, and I can find BIs with identified roles, the unit may score on all the dummies.
- If the unit is scored with BusInd, and I can't find any BIs with identified roles, they are left missing, assuming that the coder did not have sufficient information.
- If the unit is not scored with BusInd, and I can't find any BIs with identified roles, they receive a score of 0 on all the dummies.
- If the unit is not scored with BusInd, but I identify an actor that fit the definition of BI with accompanying role, the unit may score on all the dummies.

3.3.2.2 vRF49 Index

I also create an index based on vRF49. The index assumes that the closer you are to the decision makers the higher the degree of involvement. Member of national delegation and negotiation body are assumed to both be insider positions and are thus merged into one value. The final index thus has three values and is thus going from low degree of involvement to high degree of involvement.

1=Low degree of involvement (Exert pressure outside the negotiations)
2=Intermediate degree of involvement (Exert pressure inside the negotiations)
3=High degree of involvement (Inside position, member of national delegation or member of the negotiation body)

3.4 The outcome of regimes

How can we measure the behavior of states? In order to assess whether business actors make a difference to outcomes of international processes, I will measure the effect on the outcome of the regimes.

I will use two dependent variables, compliance and regime effectiveness. They both attempt to capture the same phenomenon that is the outcome of international cooperation, but they emphasize different aspects. Compliance is associated with the performance of the states, whereas regime effectiveness is associated with the actual behavioral change.

3.4.1 Compliance

The assessment of compliance is associated with the performance of the states. According to Oran Young (1979) "Compliance can be said to occur when the actual behavior of a given subject conforms to prescribed behavior, and non-compliance or violation occurs when actual behavior departs significantly from prescribed behavior." (Simmons 1998). This definition excludes both implementation and regime effectiveness. Implementation can be defined as: "the adoption of domestic rules or regulations that are meant to facilitate, but do not in themselves constitute, compliance with international agreements." (Simmons 1998:77). Compliance is then understood as the domestic enforcement of such facilitation.

Furthermore, "compliance is rarely a transparent, binary choice" (Simmons 1998:78). By this it is understood that agreements are often ambiguous and subject to interpretation, and any measure of compliance will therefore also be to some extent subject to interpretation.

According to Murdoch and Sandler there is a possibility that the states will act as though they are complying with the regime, but in reality they are only pursuing the policy that they intended to in the first place. An example is the Montreal Protocol. It is shown that the US, and other industrialized states, had unilateral interests in providing this public good(Murdoch and Sandler 1997). This is good seen from an environmental perspective, but it reduces the explanatory power of cooperation efforts. Any assessment of compliance should therefore make sure that the compliance is a result of the regime.

Compliance will be operationalized using the indicator "Conformity".[11]

[11] Compliance and conformity will be used interchangeably in the thesis

In the IRD compliance is represented by RC5; "303A Does the behavior of important actors generally conform with the provisions of the regime? Did the regime exert a causal influence on these developments?"

The variable is a dichotomy with 0 indicating that the members only conforms with some of the provisions, or less, and 1 indicating that the members' behavior meets regime requirements or more.

This variable is divided in two in the IRD, as indicated by the two questions. In the BUY dataset, this variable is merged into one. It is first weighted through multiplication, before creating dichotomies with the values 1 and 0. A unit receives the score of 1 on the final variable only if it has a score on the high end of the scale on both the questions.

When creating dichotomies, values 1-2 are assigned 1, and values 3-5 are assigned 0.

3.4.2 Regime effectiveness

A regime is effective "[…] to the extent that it successfully performs a certain (set of) function(s) or solves the problems that motivated its establishment." (Underdal 2002a:4). This definition is in many ways the consensus definition of regime effectiveness, first spelled out by Underdal (1992), read in Underdal (2002a). It emphasizes the functional performance and problem solving of a regime.

The stages of a regime, and also the performance to be evaluated, are referred to as output, outcome and impact. The relationship between them is an assumed causal relationship between events. *Output* is the end product of regime formation, i.e. a new set of rules and regulation. *Outcome* is the behavioral change generated by implementation. *Impact* is the change in the biophysical environment (Underdal 2002a:6).

Measuring regime effectiveness is a complicated task. Classifying a regime as effective requires more than simply just looking at the regime;

"[…] Determining regime effectiveness is not merely a matter of descriptive measurement; it is as much an exercise in causal inference. In addressing the question of whether or to what extent a regime made a difference, we compare the state of affairs that obtains with the regime in place with the hypothetical situation that would have occurred in its absence. In doing so, we not only try to measure difference, we also attribute the difference in human behavior or the health of the environment to the existence or operation of a regime." (Underdal 2002b:52).

If you observe behavioral change or problem solving in the aftermath of the creation of a regime, this might be due to the regime, or it might be due to other things. The financial crisis in 2008 was followed by a decline in production, which naturally reduced emission. Behavioral change may be correlated with the establishment of a regime, but it is not always correct to assume a causal effect.

Put simply, causality means that X is (part of) the reason why Y occurred. More specifically; ”Minimally, causes may be said to refer to events or conditions that raise the probability of some outcome occurring (under ceteris paribus conditions). X may be considered a cause of Y if (and only if) it raises the probability of Y.” (Gerring 2005:169).

In this particular study, the inherent causal assumption in the concept of regime effectiveness might be more than a methodological challenge. This can be illustrated with the example of the Montreal Protocol, which is identified to be the paradigmatic example of the role of business and industry. The regime achieved high scores on behavioral change and distance to collective optimum, the two indicators of regime effectiveness (Wettestad 2002:164). In the period 1987-1996 the regime received the highest score on both dimensions. Using the model in Miles et al led to a conclusion that the regime had significant effects on the state of affairs.

An alternative explanation is offered by (DeSombre 2000). She has suggested that the main reason why the Montreal Protocol was effective was action taken by the industrial lobby in the United States (DeSombre 2000:27). The American company DuPont played an important role in making the ozone regime effective, by developing new technology and changing the premises for political discussion. The behavioral change thus came before the regime was put in place.

This argument, if correct, might intuitively weaken the causal effect of the regime itself. If the variable with the most explanatory power lies outside the realm of the regime, then it is difficult to argue that the regime is an important independent variable.

For this reason the regime effectiveness[12] variable is a construct of two queries, one addressing the substantial question and the other addressing the question of causality. The coder must treat this matter with cautiousness, not merely as an empirical observation, for example through the means of process tracing.

[12] Regime effectiveness will in this thesis be used interchangably with problem change.

The problem change (or regime effectiveness) variable will thus be understood as change in the state of the world that can be attributed to the working of the regime. Implementation will be understood as part of problem change.

The variable is a dichotomy with 0 indicating low effect (the problem stayed the same or worsened), and 1 indicating high effect (that the problem improved slightly to considerably).

In the IRD this dimension of regime effectiveness is represented by RC11; "304A How did the state of the world change during this period with respect to the problems addressed by the regime? Did the regime exert a causal influence on these developments?"

This variable is divided in two in the IRD, as indicated by the two questions. In the BUY dataset, this variable is merged into one. It is first multiplied and weighted, before creating dichotomies with the values 1 and 0. A unit receives the score of 1 on the final variable only if it has a score on the high end of the scale on both the questions.

When creating dichotomies, values 1-3 are assigned 0, and values 4-5 are assigned 1.

3.5 Control variables

3.5.1 Problem malignancy

Malignancy is a complex construct, and here it will be understood as a two dimensional concept.

"The political malignancy of a problem will here be conceived of primarily as a function of the configuration of actor interests and preferences that it generates. According to this conceptualization, a perfectly benign problem would be one characterized by identical preferences. The further we get from that state of harmony, the more malign the problem becomes." (Underdal 2002a:15)

In this thesis I will use a construct of malignancy that has two dimensions. The first dimension gives an indication of how similar or un-similar each country perceives of the problem and the means necessary to solve it in terms of costs and benefits. This query fits well into the incongruity-coordination continuum identified in Underdal (2002a:21), more particularly with the dimension of the "*Essence of the problem*". A problem of incongruity is characterized by incentive distortion, whereas a problem of coordination is characterized by imperfect information and communication failure.

The first dimension is represented by this query: “101I Regarding interests involved in the issue area: How compatible/incompatible were the interests of the parties?”

The second dimension addresses the assumption that some problems only require coordination of behavior, and thus there will be no need for anything else than a common understanding of how to behave. This query fits well into the incongruity-coordination continuum identified in (Underdal 2002a:21), more specifically under the dimension of “*post-agreement implications"*. Coordination problems are “self-enforcing; no incentives for unilateral defection from an agreed solution”, whereas in incongruity problems “incentives to unilaterally defect tend to persist; transparency, monitoring, and enforcement mechanism important”.

The second dimension is represented by this query: “101G Regarding interests involved in the issue area: Was there an incentive to disobey the rules even after the regime was put in place?”

One implication of this definition of malignancy is that fisheries are more malignant than pollution problems. In pollution problems, when the regime’s requirements are implemented, this commonly entails finding a substitution to the behavior. An example of this is the Ozone problem, where the solution entailed finding a substitute for CFCs. After this substitute is adapted and implemented, there are few reasons for any state to disobey with the rules. For fisheries on the other hand, there will always be an incentive to disobey.

In summary then, problem malignancy is a two-dimensional understanding of the conceptual continuum of the incongruity-coordination problem. A low score indicates a problem of coordination, while a high score indicates a problem of incongruity and incentive distortion.

Malignancy has three values, with 1 indicating low malignancy, 2 indicating medium malignancy and 3 indicating high malignancy.

In the IRD this construct is represented by questions RF7 (101G) and RF9 (101I).

This variable is constructed of addition and mean. The values of each query are added together, and a rounded-up mean constitute the value of the final variable.

3.5.2 Uncertainty

Uncertainty has in other statistical studies of regime effectiveness been statistically interacting with malignancy (Miles et al. 2002).

The variable is a dichotomy with 0 indicating low uncertainty (strong or very strong established understanding) and 1 indicating high uncertainty (that the understanding of a problem was partially, low or not at all established).

In the IRD this construct is represented by question RF22 "104A Was the nature of the problem well understood?" 1-2 becomes 0 and 3-5 becomes 1.

3.5.3 Rule depth

"The key to effectiveness is once again deep and dense rules" (Breitmeier 2009:22).

Depth as measured as rule density and specificity refers to an outcome of the negotiations, namely the rules that the states have agreed to follow. There are two extremes on this continuum, which can be referred to as deep and shallow regimes.

The construct of shallowness also appears in the article by Downs et al (1996). Here, it is meant to capture the idea that some regimes are merely codifications of preceding efforts (Downs, Rocke, and Barsoom 1996:391). The opposite treaty characteristic of shallowness is depth, which can be understood as "…the extent to which it requires states to depart from what they would have done in its absence" (Downs, Rocke, and Barsoom 1996:383). What the states would have done in a regime's absence refers to the non-cooperative outcome, which is a counter-factual. In this sense, shallowness is compared to the non-cooperative outcome.

In the IRD understanding of rule density and specificity, the depth is compared to what is considered necessary to solve the problem. I will assume that there is a straight line between what is necessary to solve the problem and the cooperative outcome, so that shallowness as used by Downs et al is the opposite concept to rule depth in IRD.

Rule depth has three values, with 1 indicating low shallowness, 2 indicating medium shallowness and 3 indicating high shallowness.

In the IRD this construct is represented by question RA15; “205G Is the regime shallow or deep as measured by the density and specificity of its rules?” 1-2 becomes 3, 3 becomes 2 and 4-5 becomes 1.

3.5.4 Decision rules

Decision rules are believed to be associated with impact of business actors; “Decision-making rules specify the level of support necessary for collective decision to be adopted and may have a distinct impact on target group influence” (Skodvin, Gullberg, and Aakre 2010:857). The reason for this expectation is that when there is a demanding decision rule the business only needs to convince one or a minority of decision-makers to succeed in their effort.

“Decision rules” has two values, with 0 indicating Unanimity and Consensus and 1 indicating everything else (Weighted/unweighted voting, Qualified majority, Simple majority, Right to opt-out - file objection).

In the IRD this construct is represented by question RA32; “210B What decision rules does the regime provide for and use in arriving at decisions?”

3.6 Missing

For all the variables taken from the BUY (1.1.1-1.1.6), units that have received scores such as “do not know’, “non-applicable” or do not exist, or similar, in the IRD are coded as missing.

The variables created for this study (1.1.7-1.1.8) the same approach is taken. One specification should be made. In the creation of the business variables, I used a variable in BUY indicating whether there was a business actor present in the negotiation or not, to help narrow the sample. This was based on RF31 in IRD, which asks coders to indicate whether or not different types of non-state actors were present. It did however happen that units were registered with a business actor in RF31, and not in the RF49 and RF32. Thus, if a unit received a positive score on RF31, but no business or industry actor is specified in RF49 or RF32, it is assumed that the coders did not have the information, and this unit will be coded as missing. On the other hand, if a unit has no business or industry actor in neither RF31 nor RF49/32, the unit scores 0.

3.7 Methodological concerns

The IRD and the final dataset used in the thesis are built up of regime components. The empirical universe consists of 23 regimes.[13] Each regime usually consists of a number of agreements that are independent in time and setting. To say that they are completely independent of each other would however not be completely correct. They are of course within the same regime, and time can be an important factor to whether the regime is successful or not. Thus there might be some dependency between the units. However, the analysis addresses specific correlations that are not believed to be crucially affected by this.

Having two coders code each regime component further splits the data. The reason for this is it that it decreases the likelihood of bias, and if there is controversy to some of the scoring, this will be balanced. This makes the units even more dependent of each other.

Units are seldom completely independent of each other. It is common to assume that when the sample is drawn randomly from the universe, the dependency can be overlooked because then the dependency is random rather than caused by selection bias. In this case the units are not completely random, they are chosen because they are international environmental regimes. Because I will only draw inference over the sample and not be preoccupied with generalizing to other regimes, these issues are not as crucial as they necessarily are when you wish to generalize to a bigger universe.

This points to a central idea in this statistical analysis. I wish to see patterns across regimes, not generalize. I am confident that this goal can be safely achieved despite the concerns presented here.

I will use the term "effect" throughout the analysis. This refers to the correlation, and the assumed temporal relationship between the variables, not an understanding of statistics as causal.

[13] See appendix for complete list of regimes.

3.8 Descriptive statistics

In this section I will briefly present the descriptive statistics for the business variables and the dependent variables. For descriptive data of the control variables, see Breitmeier; Underdal and Young (2006).

Table 1 shows the frequency of success in terms of compliance and problem change. It shows that approximately half of regime formation processes end up with a positive outcome. It also shows that it is more difficult to achieve actual problem change than compliance.

	0	1	Total (Valid cases)	Standardized
Conformity dic	45	73	118	0,62
Problem change dic	68	77	145	0,53

Table 1 Frequencies for the dependent variables

How frequent are business actors participating in international environmental regime formation and negotiation? A pattern that emerges from these frequencies is that it is more common for business actors to exert pressure inside or outside the negotiations, than to have "insider positions". Laggards, pushers and neutrals appear approximately equally often.

	0	1	Total (Valid cases)	Standardized
NGO_BusInd	62	98	160	0,61
Member of national delegation	108	13	121	0,11
Member of negotiation body	111	10	121	0,08
Exert pressure inside The negotiations	73	48	121	0,40
Exert pressure outside The negotiations	63	58	121	0,48
Pushers	73	35	108	0,32
Neutral	78	30	108	0,28
Laggards	71	37	108	0,34

Table 2 Frequencies for business variables, dummies.

The frequencies for the index are similar, although the Neutral value is bigger due to also containing regime components with a combination of two or more of the value.

4 Statistical analysis

4.1 Introduction

The main purposes of this chapter are to present the empirical findings and to discuss them in light of the theoretical framework. I find that the negative relationship between laggards and problem change is the most robust, whereas the other results are less conclusive.

I introduce section 4.2 by explaining how the logistic regression has been executed, by highlighting the choices I made during runs. In section 4.2.1 I present the results from the two logistic regression analyses. I first present the results from the analysis of compliance, providing preliminary interpretations, before I go on to present the results from the analysis of regime effectiveness. I then summarize the findings from this part of the analysis. In section 4.2.2 I briefly compare the explained variance in the basic model and the business influence model. Section 4.2.3 is dedicated to addressing the basic model and how it responds to the introduction of the business variables.

Section 4.3 briefly replicates the most important findings using a different technique, partial correlation. Section 4.4 compares the effects of position on the two dependent variables, and section 4.5 summarizes the chapter.

4.2 Logistic regression

In order to get robust results and to reduce the empty-cells problem that can arise when running many variables with a limited number of units, and in addition aspiring for high explained variance and goodness-of-fit, I use eight slightly different models.

Model 0 is the basic model only including the control variables. I start with this so that I can get a better overview of what happens with the conventional explanatory variables when I introduce the business variables. In model 1 the basic model is expanded with the dummy set business involvement. In model 2 the basic model is expanded with the dummy set business position. In model 3 all variables are included in order to control for all variables.

In model 4 I remove variables that seem unlikely to become significant (within the framework of this thesis). There are two exceptions to this. The first is business laggard in conformity, which never gets significant, but is kept because it is perceived to be a substantially important

variable. The second exception is connected to an important goal in this model, namely to achieve high goodness-of-fit. For this reason the variable decision rule is kept even though it never becomes significant. This change in modeling improves the goodness of fit to the best seen in this analysis, and this indicates that the model explains the variation in the data material well.

Model 5 introduces the indexes for business position and involvement. Model 6 includes malignancy again; due to the sudden change in the effect of depth there is reason to control what happens with malignancy. This model is only shown for problem change. Model 7 includes compliance as an independent variable and this is naturally also only done for problem change.

Each model has an important purpose; however, the total impression of the relationships between the variables has to be drawn from the set of models and the partial correlation presented in the next section.

There are two dependent variables in the analysis. They are included because I wish to compare them, and for this reason I have presented the effects in two columns.

I have included two ways of communicating significance. The reason for this is that because there are small differences between the models there are also small differences between the significance. Some variables are significant according to the conventional way of yard-sticking significance in some runs, and not significant in other, and it might be interesting for future research to test those who are nearly significant, with other models.

It was tested for statistical interaction by using the function Selection on a variable for the business variables and the automatic function in SPSS. It did not generate anything, mainly due to few cases in each category (“Es”), thus it is not presented in the analysis.

Table 3 Logistic regression

* =p<.10
** =p<.05
***=p<.01

		Conformity				Problem change			
		B	Exp(B)	Sig	H-L	B	Exp(B)	Sig	H-L
Model 0	Intercept	-1.038		.511	13.069	-.995		.421	13.232
	Malignancy	.048	1.049	.916		-.690**	.502	.046	
	Uncertainty	-1.846***	.158	.009		.207	1.229	.673	
	Depth	1.599***	4.947	.000	76%	.842***	2.321	.003	67%
	Decision rule	.536	1.709	.492	N=72	.208	1.231	.751	N=94
		B	Exp(B)	Sig	H-L	B	Exp(B)	Sig	H-L
Model 1	Intercept	-3.609		.123	8.070	-.388		.825	9.323
	Malignancy	.349	1.418	.528		-.788*	.455	.051	
	Uncertainty	-1.476*	.229	.083		.343	1.409	.578	
	Depth	2.311***	10.087	.001		.765**	2.148	.037	
	Decision rule	1.046	2.845	.346		.481	1.617	.605	
	RF49_2_Mem_nat	-1.478	.228	.311		.069	1.072	.938	
	RF49_3_Mem_neg	2.494	12.113	.101		-.510	.600	.568	
	RF49_4_Ex_inside	.574	1.775	.627	75%	-.613	.541	.366	61%
	RF49_5_Ex_outside	-1.202	.301	.322	N=57	-.132	.876	.832	N=73
		B	Exp(B)	Sig	H-L	B	Exp(B)	Sig	H-L
Model 2	Intercept	-2.966		.218	7.002	-.764		.689	7.205
	Malignancy	.350	1.418	.538		-.510	.601	.232	
	Uncertainty	-1.482*	.227	.091		.222	.722	.722	
	Depth	2.174***	8.794	.002		.741*	2.098	.071	
	Decision rule	.854	2.348	.466		.582	1.790	.581	
	RF32_push	-1.250	.286	.207		.469	1.598	.460	
	RF32_neut	2.256*	9.547	.062	78%	-1.032	.356	.120	63%
	RF32_lagg	-.866	.421	.312	N=54	-1.338**	.262	.029	N=68

		Conformity				Problem change			
		B	Exp(B)	Sig	H-L	B	Exp(B)	Sig	H-L
Model 3	Intercept	-6.093*		.075	2.430	-.954		.659	15.226
	Malignancy	.599	1.821	.401		-.392	.676	.402	
	Uncertainty	-1.310	.270	.245		.357	.623	.623	
	Depth	3.801***	44.748	.003		.784*	2.190	.094	
	Decision rule	1.407	4.085	.394		.313	1.368	.773	
	RF49_2_Mem_nat	-.855	.425	.633		.190	1.210	.869	
	RF49_3_Mem_neg	3.562	35.222	.122		-.907	.404	.351	
	RF49_4_Ex_inside	-3.395	.034	.120		1.452	4.272	.216	
	RF49_5_Ex_outside	.050	1.051	.976		.271	1.312	.739	
	RF32_push	-1.786	.168	.153		.387	1.472	.613	
	RF32_neut	4.154**	63.712	.031	84%	-1.852*	.157	.090	75%
	RF32_lagg	.822	2.275	.515	N=50	-2.632***	.072	.008	N=64
		B	Exp(B)	Sig	H-L	B	Exp(B)	Sig	H-L
Model 4	Intercept	-5.071*		.085	1.600	-1.034		.622	12.708
	Malignancy	-				-.382	.683	.412	
	Uncertainty	-1.119	.327	.255		.418	1.519	.540	
	Depth	3.541***	34.503	.001		.787*	2.197	.090	
	Decision rule	1.437	4.210	.300		.309	1.362	.771	
	RF49_2_Mem_nat	-				-			
	RF49_3_Mem_neg	3.280	26.567	.135		-.987	.373	.300	
	RF49_4_Ex_inside	-3.388**	.034	.027		1.583	4.869	.159	
	RF49_5_Ex_outside	-				-			
	RF32_push	-1.608	.200	.145		.484	1.622	.496	
	RF32_neut	4.408**	82.099	.018	88%	-1.824*	.161	.091	75%
	RF32_lagg	1.057	2.879	.378	N=51	-2.533***	.079	.007	N=64

		Conformity				Problem change			
		B	Exp(B)	Sig	H-L	B	Exp(B)	Sig	H-L
Model 5	Intercept	-1.142			2.249	-2.151		.241	8.645
	Malignancy	-				-			
	Uncertainty	-1.265	.282	.118		.186	1.204	.770	
	Depth	1.885***	6.587	.002		.386	1.472	.344	
	Decision rule	.163	1.177	.880		.712	2.038	.440	
	RF49_tri_index	.098	1.103	.800	78%	-.569*	.566	.069	67%
	RF32_tri_index	-.215	.807	.640	N=51	.938***	2.555	.008	N=67
		B	Exp(B)	Sig	H-L	B	Exp(B)	Sig	H-L
Model 6	Intercept					-1.817		.365	6.466
	Malignancy					-1.080**	.340	.021	
	Uncertainty					.406	1.502	.544	
	Rule depth					.383	1.467	.379	
	Decision rule					1.391	4.020	.198	
	RF49_tri_index					-.523	.593	.103	66%
	RF32_tri_index					1.180***	3.255	.003	N=64
		B	Exp(B)	Sig	H-L	B	Exp(B)	Sig	H-L
Model 7	Intercept					-1.679		.479	10.110
	Malignancy					-.693	.500	.213	
	Uncertainty					.041	1.041	.961	
	Rule depth					1.522**	4.580	.043	
	Decision rule					1.158	3.183	.361	
	RF49_tri_index					-.313	.731	.410	
	RF32_tri_index					.748	2.112	.119	68%
	Compliance					-.436*	.646	.058	N=47

In the following I will present the results, structured after three questions:

1) What is the direction and strength of the effects of the business variables?
    a. Compliance
    b. Problem change
    c. Comparison
2) Does the total explained variance of the model increase when I introduce the business variables?
3) How do the control variables respond to the introduction of the business variables?

	Compliance	Problem change
Malignancy		-
Uncertainty	-	
Rule depth	+	+
Decision rule		
RF49_2_Mem_nat		
RF49_3_Mem_neg		
RF49_4_Ex_inside	-	
RF49_5_Ex_outside		
RF32_push		
RF32_neut	+	-
RF32_lagg		-
RF49_tri_index		-
RF32_tri_index		+
Compliance		-

Table 4 overview correlation direction

The main findings can be summarized as follows:

1. There is a positive relationship between the presence of neutral business actors and compliance.
2. There is a negative relationship between the presence of laggards and regime effectiveness.
3. The explained variance is not improving any more than we would expect when increasing the number of variables.

4. Malignancy and depth seem to be sensitive of the business variables, but this might also be due to the low number of units.
5. An interesting tendency is that the business variables seem to have opposite effects on the two dependent variables.

4.2.1 Business influence model

These analyses will mainly take into consideration the dummies, and for the most part ignore the indexes. I will start will compliance, considering involvement and position accordingly. The analysis for compliance has some inconclusive findings. Then I will go through problem change, considering in turn involvement and position.

4.2.1.1 Analysis 1 – compliance

The *involvement variable* does not perform the way it is expected. Two of the dummy variables are taken out of the analysis in model 4. The index shows no correlation with compliance. The expectation with this variable was that the closer they came to the decision-makers the more the decision-makers would listen to them. This suggests a statistical interaction between degree of involvement and position, the more pusher you are the more you get involved. As mentioned earlier this statistical interaction failed to perform, but I decided to keep the variable because of the strong coefficients.

There are some interesting patterns with regards to the two dummies that are left in model 4; "Exert pressure inside the negotiations" and "Member of the negotiations" (RF49_3 and RF46_4).

"Member of the negotiations" has a strong positive effect (not significant). One possible interpretation could be that when business actors sit in the negotiations, as representatives from the implementation phase, the agreement that is reached is balanced and anchored in the implementer. A balanced agreement that does not go too far with regards to the requirements is easier to enforce than an agreement that goes too far and costs too much. Having business actors sitting in the negotiations will ensure that the agreement is feasible and not too costly. This degree of involvement thus increases the likelihood for actual state compliance. However, when we look at the descriptive statistics for "Member of the negotiations" we see that the number of regime components that have business actors in this category are only ten. So there is a strong correlation, but it is not an important feature of the data that these actors

have great influence. They might have, and it is likely that they do, but it cannot be concluded from this material.

The effect of "Exert pressure inside the negotiations" indicates a strong, negative and significant correlation between inside pressure and conformity. This is a "lesser" degree of involvement than "Member of the negotiations". The likelihood that the states will conform to the provisions decreases when business actors are lobbying inside the negotiations. It is difficult to interpret when the information we have is that they lobby, not which direction.

One possible interpretation is that when they exert pressure inside the negotiations they pull the regime so far that it gets too demanding for the states.

This interpretation would however assume that this degree of involvement would be more pusher than the ones operating as member of the negotiations. Another possible interpretation would assume that they have laggard attitudes and that they are so effective in blocking the process that the agreement will not be complied with. This interpretation is somewhat counterintuitive to the rest of the interpretations for compliance; which suggest that the role of negative and intermediate business actors is to make the agreement politically feasible. There is no clear interpretation from this. It is difficult to interpret these results because an interpretation would assume a position for the business actors either way.

The analysis "reveals" that there is more to positive and negative outcome than merely a simple continuum. If the governments decide to spend resources and time on making an international regime to protect the environment, the goal of that regime would be to design a regulatory framework that would generate behavior that is more environmentally friendly. If we assume that all states initially prefer an agreement, and all other variables were constant (no malignancy or uncertainty), then the goal should be met. The logical and natural consequence of a regime formation process is a regime, ceteris paribus. Then the success of that attempt, that the regime is established and the behavior is regulated, is the "normal" end stop in the chain of event., it is the end of a linear continuation of events. If business actors manage to delay or hinder this process, then that is a brake in the chain of events; it is the "abnormal".

This suggests that if business actors do intervene in negotiations it is because they have a desire to change that linear chain of events. For this reason it is more likely that a business actor that participates in negotiations are negatively programmed. This is associated with the default assumption that business actors are blockers, not drivers.

To sum up, “Exert pressure inside the negotiations” gives the most reliable results given the number of observations on the other dummy, but the interpretation of this is highly speulative. If we were to read anything into the fact that the two dummies have different directions, it would be that the closer you are to the decision-makers the more likely it is that you manage to form the regulations the way you want, and then the implementation process would be easier. If you operate farther away, you are less likely to be able to form the agreement in your direction, and thus the agreement will be unbalanced and difficult for the states to enforce. This could be a lesson for policy-makers that strive to land on international agreements; if you have the implementation expertise at the table, it is more likely that you will succeed in implementing. This is of course under the condition that the business actors will not block the agreement altogether, but contribute with the necessary expertise.

This is somewhat in accordance with the results for the position variable, or rather; it makes sense to view them together.

Only one of the business position dummies is significant for conformity, the one referring to neutrality towards regime formation. The effect for neutrality indicates a strong positive relationship between neutrality and conformity. This relationship grows stronger throughout the analysis and eventually it is very strong.

A possible interpretation of this result is that neutral business actors that do not push in any direction will contribute to a regime that is balanced and politically feasible. Because they are in the negotiations, or close to them at least, it is reasonable to assume that they will be able to provide the decision-makers with the information they need in order to find a solution that the implementers will be satisfied with. Or put slightly different; they can provide decision-makers with the solution they need to be able to implement. This interpretation would be supporting the theoretical expectation that business actors by the virtue of controlling the implementation process can set the parameters for what is politically feasible.

Another facet of this interpretation could be that given that neutrals are in an intermediate position, sitting on the fence, they are perhaps not against regulations per se, but against national regulations. They would then see the negotiations as a tool to lobby for international agreement, as opposed to an expected domestic legislation.

Looking at the other positions, pusher and laggards, these are not significant, but they are for the most part consistent and suggest an interesting pattern.

The effect of pushers is negative throughout all the models where it is included, somewhat stronger after business role is included again in model 3. Pushers never gets significant, but this variable is closer to significance than laggards ($p<.145$ at best).

The fact that pushers have a negative effect on compliance is consistent with the interpretation of the effect of neutral. Imagining a situation where the best input for compliance is neutrality, because of the balanced agreements that will be generated, pushers one the other hand might serve the role of pulling the regime so far that the compliance will be too costly. This would give low compliance rates, but not because the actual behavioral change is worse, but because the requirements are high.

Looking at the effect of laggard in model 3 and 4, we see that the correlation between laggards and compliance is positive.[14] Using the same framework as above leads to an interpretation that laggards will manage to make the agreement very little demanding, so that complying with it will be easy and cheap. An agreement that does not require much from the states will most likely achieve high compliance score.

To sum up, two of the position dummies support the idea that the role of business actors can be to find the level of requirements that is feasible and as such is an expression of implementation control and expertise. The effect of pusher might indicate that business actors can play teams with the environmentalists to pull the agreement too far for what is politically feasible. These findings suggest that the business actors do succeed in influencing, because the interpreted effects on the compliance variable is in accordance with the desired direction of the influence attempts. The interpretation is based on assumptions about the nature of the relationship between the direction and the outcome, we believe it to be such that they pull the agreement in a direction that is either feasible or not. This assumption is not tested here, and should be tested before we can say this with certainty. There is also an assumption that is unevenly applied, the assumption of who represents the implementer. In the interpretation of the negative effect of pushers it is assumed that this group of business actors are not in control of the implementation process, whereas for the neutrals and the laggards it is assumed that they are.

[14] The laggard variable is not entirely consistent. A curious result is that when business position variables are controlled for business role variables, the relationship between laggards and conformity suddenly change direction and become positive. It is not significant, and is probably a sign that the variable is not very robust with conformity.

4.2.1.2 Analysis 2 – regime effectiveness

The *involvement* variables have mixed results. "Exert pressure inside the negotiations" has an almost significant positive moderate effect on problem change. The business involvement index gets significant in model 7 and shows a negative correlation with problem change.

A positive correlation between "Exert pressure inside the negotiations" and problem change suggests that when business are involved in the negotiations, there is moderately increased likelihood that there will be problem change. One interpretation of this is that involvement of implementer will increase the likelihood of successful implementation. This supports the intuitive understanding that when you include someone in a decision process it will be easier to govern after the decision's principles.

There is a negative relationship between "Member of the negotiations" and problem change. The fact that this is negative while the former was positive suggests that the closer you are to the decision-makers, the less likely it is that the regime will solve the problem. An interpretation of this is if you are in an insider position you are in a better position to actually influence the decision-makers and block the negotiations. This would assume that the insider position is more likely to be negative towards the formation of a regime. There should however not be put too much emphasis on this correlation, given that the number of units in this category is ten.

The degree of involvement of these actors is not as important for the outcome of the regime, but it does have a small effect indicating that the closer they are to the decision makers the less likely it is that the regime will solve the problem. The interpretation of this is at first glance inconclusive. The closer they are to the decision-makers the less likely the regime will solve the problem. Seen together with the first result, this could indicate that the most positive business actors are left out in the hall. This would contradict the theory that a coalition with environmentalists gives business actors greater leverage. The correlation between degree of involvement and position is positive and robust when we control for third variables.[15] This indicates that the more positive business actors are the higher the degree of involvement. If this is true it would support the coalition theory, and the interpretation is inconclusive. However, it might be that this powerful coalition is not expressed at the actual negotiations,

[15] The average when controlling for all other variables in this analysis is .454***.

but is determined domestically before the state delegations arrive at the table. In that case, you would see no sign of this coalition in the data material used in this thesis.

The effect for *laggards* indicates a strong negative relationship between laggards and problem change. A possible interpretation of this is that the attitude of business actors is a manifestation of the feasibility of a regime. If the business actors do not support the regime, the implementation process will be blocked. The outcome is not assumed to be a direct result of the lobbying, but the lobbying is an indication of what is to come. If the business actors say no, the regime will be difficult to implement.

Thus, the effect of the lobbying in the regime is not the most interesting part of this finding. This measure is an analytical pit stop, in the sense that the relationship does not assume any transfer of messages, and the effect of that. It rather indicates that if business actors are negative in the beginning of the process, they will still be so after the regime is put in place. In other words, the regime does not necessarily change their incentives or the course of action. Remembering that the attitudes in the negotiations are assumed to be an expression of the business strategy, and this assumption is reasonable to make, it suggests that the business strategies are the same before and after the regime.

Interpretation suggests turning the argument up side down. It is not so much that business will change the behavior of states, but more that regimes may not always manage to change the behavior of the business actors.

Turning the argument shows that business actors are in control of the implementation process, and that will indirectly hamper the political process of forming a regime. This is one of the most important findings in this analysis.

The effect for neutral indicates a negative relationship between neutrality and problem change. There is a weak positive (insignificant) relationship between pushers and problem change. This suggests that the negative and neutrals have a bigger influence on problem change than the supporters, and this lends support to the default assumption that the influence of business actors is primarily negative.

Introducing the index makes me confident that the dummies have the "direction" that I intended. The index suggests a positive moderately strong and significant correlation between business position and problem change, and the drive of this direction seems to be in the lower end of the scale.

To sum up on problem change: when business actors are negative towards regulations in the formation of a regime, it is more likely that the regime will fail in solving the problem it was established to solve. The index shows a positive relationship between position and problem change, and this is nuanced in the dummy runs where it becomes clear that it is the laggards and the neutrals that have that the greatest impact on the outcome. Business opposition can be lethal for a regime, whereas business support has a weak and insignificant, but positive effect.

4.2.1.3 Summary

The interpretation of the effects of position on compliance, suggests that neutrals and laggards manage to make the agreement feasible in the meaning not too demanding. Assuming that these business actors represent the implementers, this is line with the expectations. Note that this interpretation assumes an understanding of the correlation as a causal relationship, and we need to test and potentially strengthen the assumption with further research.

The interpretation of the correlation between position and problem change, suggests that when business actors express a negative attitude in the negotiations, the problem is less likely to be solved. This correlation of events can be used to conclude that often the regime will not change the behavior of the business actors.

4.2.2 Explanatory power of the models

Model 4 aims to maximize the statistical explanatory power by removing variables that are not significant. Measures of explanatory power must be interpreted with cautiousness, especially for logistic regression, because none of the existing alternatives are very trustworthy (Tufte 2000:42). To compensate for the weaknesses I use two different measures. They correspond well most of the time, which is comforting.

It is common to assume that explanatory power increases with the number of variables. The reason is that the more info you put in the model the better the model will predict the variance in the dependent variables. This suggests that model 3 should be the model with the best goodness of fit because this model includes all variables. It is however model 4 that best predicts, even though three variables are taken out. This might suggest that there is a better explanatory power when including the business variables. Looking at model 5 for conformity does however not support this. For problem change the same pattern emerges.

To sum up, the explanatory power is approximately equally good with the “business model” as the basic model.

4.2.3 Basic model – how does it react to the business variables?

The main goal of this section is to discuss to what extent the control variables react to the business variables. Both malignancy and depth are reacting to the introduction of the business variables by becoming weaker and insignificant. This swinging concerns mainly problem change. There is however no clear pattern.

4.2.3.1 Compliance

The effect for *depth* indicates a strong and positive relationship between depth and conformity and it stays strong and significant throughout all the models. It gets stronger when introducing the business variable. This is in line with earlier research that has suggested that this is one of the most important explanatory variables for a successful outcome of a regime.

Uncertainty has a significant negative effect through model 1 and 2, but loses its significance in model 3 when all the variables are included, and is still not significant in model 4. This might be due to a small sample and many variables which make it difficult to get significant results, because it is not that far away from being significant.

Malignancy and *Decision rule* has no correlation with conformity in this analysis.

4.2.3.1 Regime effectiveness

For regime effectiveness, malignancy and depth are most sensitive.

The effect for *malignancy* indicates a negative relationship between malignancy and problem change. This is in line with what was expected. However, the development of the correlation throughout the different models shows that malignancy is not as robust as expected.

The negative effect of malignancy looses significance when I include the laggard dummy in model 2. This might suggest that the laggard dummy is closely related to the concept of malignancy. Substantially, this is not unthinkable, given that malignancy as a construct is meant to cover calculations of cost and benefit, among other things. Often it is business and industry actors who have to bear the costs of changing behavior. Statistically, partial correlation between malignancy and laggard is positive and significant (average of pearsons r=.33[16]), while there is no correlation between malignancy and the values neutral and pushers. Even though I would have expected a higher correlation if there had been a substantial

[16] Average of control variables depth, uncertainty and decision rule.

overlap between the constructs, the substantial interpretation of this relationship is so intuitive that I would support further research.

When I replace the dummies with the index in model 6 the effect comes back in full vigor, stronger than ever before in this analysis. This might be due to the fact that laggards is the most important value, but such an interpretation would be subject to a lot of uncertainty.

When I introduce compliance malignancy again gets weak and insignificant. This is not so easy to interpret; it could suggest an overlap between malignancy and compliance, but this is not confirmed by the data and would not make sense.

To sum up on malignancy and problem change, the variable looses strength and significance when I control for laggards and compliance. It could be interesting to follow the path of looking at the correlation between laggards and malignancy, to come to grips with the seeming instability in this variable when meeting business variables. Further empirical research is however needed for that.

Moving in to the next control variable, the effect for *depth* indicates a positive relationship between depth and problem change.

When I replace the position dummies with the business position index in model 5 the significance of the depth disappears. This is suggesting that the position index might affect depth and be underlying. The correlation between position index and rule depth controlled for third variable average (malignancy, majority, uncertainty) is .28***, which is normal and does not give reasons to assume anything extraordinary.

When I introduce compliance, depth regains its strength and significance, more than it has had in any model. This is most likely due to the relationship between depth and compliance; when the negative effect of compliance on problem change is controlled for, the positive effect of depth is more visible.

The effect of *compliance* on problem change is negative and significant, but not very strong. This is approximately the same result as in Breitmeier et al (2009), and might explain some of the differential effects the business variables have on the two variables. This effect is also in line with the argument that compliance is an expression of regimes that do not really demand anything from the regime, and is thus an important input to the interpretation.

Decision rule does not seem to be correlated with problem change at all in this material; it does however get a small boost in model 6 where it gains strength and gets closer to

significance. *Uncertainty* does not seem to be correlated with problem change at all in this material. Other studies have found that there is statistical interaction with uncertainty and malignancy, a combination that is "lethal" for problem change (Miles et al. 2002). This statistical interaction was not found in this analysis. The reason why uncertainty and decision rule are kept in spite of this is because it helps to optimize the goodness-of-fit in model 4.

4.2.3.2 Summary of basic model

Depth is one of the variables that actually have the same effect on both the dependent variables, in fact the only significant one.

Depth has a positive effect on both conformity and problem change, and a stronger effect on conformity than problem change, which is somewhat surprising in the view of theory. Central assumptions in the regime literature deduces that depth, understood as incentive correcting and thus demanding, will be hard to achieve; it will lead to either non-compliance or non-participation or a little of both. It may however lead to some problem change because the states try to achieve at least some of the obligations and thus it will be better than the non-cooperative outcome. This line of thought would imply that rule depth had some positive effect on problem change and a negative effect on conformity. So this result is unexpected.

4.3 Partial correlations

Partial correlation measures the degree of association between two variables, with the effect of a third variable removed. The reason why I do this in addition to the multivariate analysis is to add transparency and to reduce number of missing. Logistic regression has a tendency to appear "closed", in the sense that the coefficients are not a direct correlation, and controlling too many variables at the same time has the disadvantage of increasing the number of missing. Analyzing the same data with more than one technique also adds to the reliability and the robustness.

In the partial correlation I use the un-dichotomized version of the dependent variable. The coefficient is pearsons r.

	Control:	Depth		Malignancy		Uncertainty		Decision rule	
	Dependent:	Con	Pr Ch	Con	Pr Ch	Con	Pr Ch	Con	Pr Ch
Business:	Neutral[17]	.13		.20*		.18		.22*	
	Laggards[18]		-.29***		-.23**		-.26**		-.37***
	Position_index		.19		.28*		.27*		.32**

Table 5 Partial correlations

There are three points to consider. First, neutral is somewhat less robust than it appears in the regression, but shows the same pattern. Second, laggard is more robust than it appears in the regression, and shows the same pattern. Third, if we compare the coefficients from the regression, the impression is that the effect from neutral is stronger than the effect from laggard. This is not the case in the partial correlations, where the coefficients for laggards are stronger than for neutral. This is an illustration of how one should be cautious of interpreting the coefficients in logistic regression isolated one by one (Skog 2004:394), and suggests that the most robust result is between laggards and problem change.

4.4 Comparison of compliance and regime effectiveness

The scope of this part of the analysis is to compare and contrast the findings for the two dependent variables, and suggest possible interpretations. The most striking and counterintuitive pattern in this regard is the opposite effect that business actors have on the two dependent variables. The negative attitude towards being regulated, one would imagine, should also lead to a lower compliance rate, but this pattern is not as clear-cut as with problem change. There is also a negative relationship between compliance and problem change. Due to the inconclusive interpretations of the involvement dummies, these are not included in this comparison.

Recall section 4.3.1.3 summarized that neutrals and laggards manage to make the agreement feasible in the meaning not too demanding. Furthermore, it summarized that when business actors express a negative attitude in the negotiations, the problem is less likely to be solved and this correlation of events can be used to conclude that often the regime will not change the behavior of the business actors.

[17] Average N=67

[18] Average N=72

In order to get a proper discussion of this question it is useful to recall the operationalizations of the variables. Compliance is operationalized as: *Does the behavior of important actors generally conform with the provisions of the regime?* It is understood that this excludes implementation, and that the content in the compliance construct is related to domestic enforcement of implementation. Problem change is operationalized as: *How did the state of the world change during this period with respect to the problems addressed by the regime?* Problem change is understood as change in the state of the world that can be attributed to the working of the regime.

Compliance is the dependent variable that is most directly connected to the regime, whereas problem change is the dependent variable most directly connected to what the regime attempts to achieve.

4.4.1 Position and compliance

One possible interpretation of why these two variables react differently to the business variables, is that whereas compliance is a good measure of to what extent the states conform with the provisions, it does not measure how demanding the agreement is in terms of behavioral change. The treaty that is agreed upon might be shallow and not demanding for the states to implement (Downs, Rocke, and Barsoom 1996). In this case it will receive high compliance rates, but most likely not change the state of the world. More specifically, "*it is most useful to think of a treaty's depth of cooperation as the extent to which it requires states to depart from what they would have done in its absence" (Downs, Rocke, and Barsoom 1996:383).*

The depth of cooperation refers to how much a treaty demands from the participant states, compared to what the states would have done in the absence of the treaty. The argument of Downs et al is that compliance is not really an expression of a real cooperation effect. Compliance is a result of treaties that do not demand anything from the states that they wouldn't have done had the treaty not come into existence. An implication of this theory is that compliance will occur only in regimes that do not demand any costly behavioral changes within the state, thus compliance will not be followed by actual behavioral change and problem change. In other words we would see a negative relationship between compliance and regime effectiveness. This is exactly what the data suggest, and so far the theory is in line with the empirical results.

However, the theory also directly says that there is a positive relationship between shallow agreements and compliance, because states will only agree to follow agreements that do not enforce them to do more than they intend to. Accordingly, if a regime has a high score on compliance, the regime is most likely a shallow regime, and a shallow regime is not likely to contribute to solving the problem any more that unilateral provisions do.

If rule depth, as operationalized in this analysis, is the direct opposite of shallowness, then we would see a negative relationship between rule depth and compliance. When the regime attempts to impose strict regulations on the states, they will not comply. Looking at the empirical findings, this is not supported. The empirical findings suggest that rule depth lead to compliance, and actually also problem change. Breitmeier et al (2009:20) also finds that the theory of Downs et al does not have empirical support.

Apparently, then, empirical results are inconclusive on this theory.

On the other hand, it is not unthinkable that a regime is both rule-dense and shallow. If we take into account the literature on voluntary provisions of public goods (Murdoch and Sandler 1997), we can view an international agreement as merely codifying unilateral regulations. If the unilateral regulations are quite demanding, the codification will be too. It will then be a question of how much the constructs of rule depth and shallowness overlap.

If we look at the operationalization of the variable used in this analysis, this aspect might not be explicitly considered; "Compared to the density of rules *considered necessary* for managing the problems in the issue area" (appendix, italic is mine). One can assume that implicit in Downs et als (1996) understanding of deep agreements is some kind of incentive corrective (term from Underdal (2002a:21)). It is possible that *density of rules considered necessary* takes this demand for incentive correction into account, and thus the constructs are opposites on a continuum.

The discussion did not generate any clear view of the relationship between compliance, rule depth and problem change, but if we do not take into account the measure of rule depth, the discussion does shed light over the relationship between business position and the outcome. According to the theory;

Laggards will manage to make the agreement undemanding and thus generate high compliance rate, but such an agreement will not achieve anything with regards to problem change. *Neutrals*, or intermediate business actors, will make sure that the agreement will be

feasible, by creating a balanced agreement, but this agreement will not achieve much in terms of problem change.

Business actors that are *supporters* of regulations might represent radical interests in terms of environmentally friendly production methods. These business actors could join forces with environmentalists and create a radical green alliance. Together they have the leverage to push the regime into adapting regulations that are very good from an environmental point of view. Such an agreement will suit their business. It might, however, prove difficult to comply with such an ambitious agreement. The pushers do not have full control over the implementation process. Normally the mainstream industry controls the implementation process, and they could possibly be blocking the states from complying. This is a scenario that will lead to low compliance.

Even though this ambitious agreement will not receive a high compliance score, it might have some impact on problem change. This is in line with the data, which suggests a small, but insignificant positive effect.

Pushers are thus assumed not to be sole controllers of the implementation, but due to their coalition with environmentalists, they will manage to pull the agreement very far. Because these business actors do not control the implementation compliance rates will still be low. But they do achieve something in terms of problem change, because the states will probably attempt to meet some of the obligations.

Viewing the difference in the two dependent variables supports the understanding of business role in affecting compliance. The interpretation suggested for this correlation was that the business actors played an important role in determining the level of requirements. This interpretation is complemented with the observation that laggards not only lead to high compliance; they also lead to poorer problem change. Because undemanding agreements by definition will not lead to problem change, this observation makes this role understanding more likely. The fact that the variable depth performs so on the contrary of this theory, however, makes it difficult to conclude with certainty on this matter.

4.4.2 Position and regime effectiveness

One interpretation from the analysis of problem change was that the position of business actors could be viewed as a *manifestation of the feasibility of a regime*. If the business actors expressed negative attitudes the implementation process could yield trouble. This

interpretation does not assume anything else than the empirical correlation between two events before and after the regime was put in place, and is thus one of the strongest empirical results.

Furthermore, if the regime had been an important factor in explaining behavioral change, then the event occurring after the regime would be different than before the regime. In other words, business behavior would have changed, from pursuing non-environmental strategies to acting environmental (for those that are correlated). This is not the case here.

Viewing the argument in light of the negative relationship between compliance and problem change strengthen the idea. One possible interpretation is that problem change does not require that states conform to the provisions, i.e. compliance. The negative relationship between compliance and problem change suggests that at least compliance is not a necessary condition for problem change.

If business support is a more important explanatory variable for problem change than compliance is, that might be an indication that the requirements of the regime, i.e. the regime itself, is not the most important determinant of changing the behavior of important target groups. The most important reason for behavioral change, in this line of thought, is endogenous in the target group interests. This puts Falkner's argument that business actors can set the parameters for what is politically feasible in a different light.

Because the actual behavioral change lies in the hands of the business and industry, they do not actually have to do anything in order to change the course of action envisioned by the regime. It suffices to do nothing, to not let anyone regulate you. Influence over international environmental on the part of business and industry actors thus does not necessarily require lobbying. They can influence the outcome of policy processes merely because they are in control of a central part of that process.

If the business actors are not in favor of this behavioral change, they might first express this opinion in the negotiations, and later they will act out their power by blocking the implementation process. In a way, they do not have to influence other actors, because they are controlling the process and the behavioral change themselves. This adds support to the relevancy of regulatory capture.

Business has however not been able to keep environmental issues off the agenda altogether, which is an indicator that they do not control the whole process. It would thus be wrong to characterize the process of international environmental politics as a "supply" of regulations,

as suggested by the theory of regulatory capture. The argument of this thesis will thus be that it can be viewed as something in between lobby influence and regulatory capture, a weak regulatory capture, or a "regulatory leash", where business and industry can set the parameters for what is politically feasible.

4.4.3 Summary of comparison

The first part of this section concluded that the comparison lends support to the idea that the role of business actors is to help determine the level of requirements in a regime. Consensus in combination with low requirements for behavioral change leads to high compliance when there are neutrals in the negotiations. However, due to lack of support when testing depth, which is assumed to be associated with requirements, this part of the analysis is inconclusive and suggests the need for studying this relationship more closely.

The second part of this section suggested that the attitude of business actors could be viewed as a manifestation of the feasibility of a regime and that the regime most likely will not manage to change the incentives of the business actors.

4.5 Summary

An important finding is that the position of business actors in the formation of regimes can be seen as a manifestation of the feasibility of the regime, and that business behavior is often the same before and after the regime is established, indicating that the regime does not change the course of action.

I have suggested that this finding can be viewed as a case of a weak regulatory capture, or a regulatory "leash". Business actors can be said to have the power to block policy processes because they are in control of the implementation stage, indicating that the regulatory power of the states might not be absolutely. Business actors do not however have complete control over the agenda-setting stage, given that many environmental problems do reach the scene and generate policy processes.

The findings support theories developed on the basis of case studies suggesting that business and industry actors are pivotal actors in the field of international environmental politics. Specifically, it serves to support and nuance Falkner's argument that business actors set the parameters for what is politically feasible, and that corporate responds have an important impact on the effectiveness of international regimes.

The analysis gives less conclusive results regarding the degree of involvement and the role of business actors on compliance. I certainly find significant and strong correlations, but interpretation is inconclusive. The results for the positive business actors were not overwhelming, but they are positive for the outlook for behavioral change.

A counter-intuitive finding is that compliance and regime effectiveness is negatively correlated, and this is also reproduced in every correlation with the business variables. It is suggested that this correlation can be interpreted as an expression of the difference between shallow and deep agreements.

The explained variance in the basic model is not significantly improved when we introduce the business variables. Two of the control variables are however sensitive to the introduction of the business variables.

5 Concluding remarks

In the thesis I have studied the influence of business actors in international environmental regimes. I argued that business actors have incentives to attempt to influence because they are target groups, and that they will most likely be able to succeed in this endeavor due to their central role in the implementation stage. I investigated the research question by modeling influence as successful attempts to change the direction of international environmental policy processes. I measured to what degree the business actors are involved and the direction they try to pull the regime in, and compared it to the outcome of the regime. This model enabled me to suggest that the probability of success in terms of behavioral change decreases if the business actors oppose the regime.

Statistical studies within this research field would gain more credibility if we increased the number of units. More units will make it more feasible to do advanced multilevel analysis, which I believe would, at least to some degree, help solve the problem of dependency between the regime components. In multilevel analysis each regime would be units at one level, and each regime component would be units on the other level. With this technique it is possible to control for any similarities within each regime. Such analysis would first and foremost decrease errors stemming from multi-collinearity. Secondly, it could bring out some facets of the regime dynamic associated with phase.

It would however also be enlightening to study some of the unanswered questions from this thesis in a more in-depth fashion. Whether or not the change in direction of the behavior of states really can be attributed to the influence attempts of the business actors is an example of such.

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Appendices

Appendix A Overview of non-state actors in the regimes in IRD

Only provided as a courtesy, the analysis is not based on this table.

Beige color – neutral, science or partly state

Green color – environmentalists

Blue color – business

Regime	Relevant stakeholders
1. Antarctic Treaty	Scientific Committee on Antarctic Research (SCAR)
	Antarctic and Southern Ocean Coalition (ASOC)
	Greenpeace
	International Association of Antarctica Tour Operators (IAATO)
2. Baltic Sea Regime	World Wildlife Fund
	Coalition Clean Baltic
3. Barents	PINRO (Russia)
	Soviet/Russian collective fishing fleet (kolkhozy)
	Soviet/Russian small private companies/coastal fleet
	Norwegian Seamen's Association
	Norwegian Fishermen's Association
	National Federation of Norwegian Fishing Industry
	Institute of Marine Research (Norway)
	Soviet/Russian Representatives for the fishing industry
4. Biodiversity Regime	UNEP
	World Resources Institute
	IUCN
	Greenpeace
	World Wide Fund for Nature
	Third World Network
4. CITES	IUCN

	UNEP
	IWMC
	WCO
5. Climate regime	Opportunist Business Actors (e.g., Solar Lobby, Nuclear Lobby)
	Pragmatic ENGOs (e.g., FIELD, NRDC, WWF)
	Obstructionist Business Actors (e.g., Coal Lobby, GCC, World Coal Institute)
	The IPCC alliance (Bob Watson, Bert Bolin, UK Meteorological Office)
	Deep Green ENGOs (e.g., Greenpeace)
	Apologist Business Actors (e.g., BP)
6. Danube River	UNEP
	Danube Forum
	EBRD
	IUCN
	Global Environmental Facility
	WWF
	World Bank
	UNDP
	UNEO
7. Desertification	UNEP
	UNDP/UNSO
	GEF/World Bank
	IFAD
	Le Reseau d` ONG sur la Desertification et la Secheresse (RIOD)
	OECD/Club Du Sahel
8. Great Lakes Management	GLU
	Great Lakes Commission
	IAGLR
	National Wildlife Foundation
	Sierra Club

	Council of Great Lakes Industries
9. Hazardous Waste	secretariat to the negotiation process and the later convention
	Greenpeace International
	Basel Action Network
	Bureau for International Recycling
	US Chamber of Commerce
	UNEP
10. IATTC	Greenpeace International
	Monitor International
	WWF
	Center for Marine Conservation
11. ICCAT	Natural Resources Defense Council
	Conservation Groups
	Fishing Industries of the Various Important Fishing Countries
	Greenpeace International
12. Whaling Regime	Humane Society
	Greenpeace
	International Union for the Conservation of Nature
	World Wide Fund for Nature
	International Fund for Animal Welfare
	UN Food and Agriculture Organization
13. London - forbrenning til sjøs	The Stockholm secretariat (established in connection with UNCHE in 1972)
	The Permanent International Association of Navigation Congresses (PIANC)
	The International Association of Ports and Harbors (IAPH)
	The Central Dredging Association (CEDA)
	Greenpeace International
	The National Union of Seamen (Britain)

14. LRTAP	IIASA/FoE/GP-coalition
15. North Sea Regime	The European Commission (NOT the EU)
	Aktionskonferenz Nordsee (AKN)
	Friends of the Earth
	Greenpeace
16. Oil Pollution	Greenpeace
	INTERTANKO
	International Association of Classification Societies
	International Chamber of Shipping
	Friends of the Earth
	Oil Companies International Marine Forum
17. Rhine Pollution Regime	German Industrial Corporations/Associations
	Dutch Drinking Water Companies
	Dutch Social Advocacy Group (Stiching Reinwater)
	Dutch Horticulturists
	Mines Domaniales de Potasse d Alsace
	Environmental Protection Groups/Local Authorities in Alsace
	McKinsey Amsterdam
	Greenpeace Germany
18. Ramsar	Ducks Unlimited
	Wetlands International
	IUCN
	WWF
	BirdLife International
	Wetlands International (as IWRB)
19. Black Sea Regime	European Union (TACIs and PHARE programmes)
	UNDP
	UNEP
	Global Environmental Facility
	The World Bank
20. South Pacific Fisheries Regime	DWFN fishing associations (e.g., American Tunaboat Association, Nikkatsuren)

	South Pacific Commission (now from 1998: South Pacific Community)
21. Ozone Regime	Greenpeace
	Friends of the Earth
	Industrial Chemical Industries (ICI)
	European Chemical Industry Council (CEFIC)
	Dupont
	Alliance for Responsible CFC Policy
22. Timber Trade	Global Forest Policy Project
	IUCN (Quasi-IGO)
	FAO (IGO)
	The British Timber Trade Federation (important forestry industry association)
	African Timber Organisation (AFO)
	International Institute for Environment and Development (IIED)
	American Forest Products Association
	Dutch Timber Federation (important forestry industry association)
	Sahabat Malaysia (SAM)
	World Wide Fund for Nature (International and its affiliates notably WWF-UK)
	Friends of the Earth UK
	Rainforest Information Centre
	Trade Records Analysis of Flora and Fauna in Commerce (TRAFFIC)
	TERRA
	Environmental Policy Institute (Washington)
	World Conservation Centre (WCMC)
	National Wildlife Federation (USA)
	Japan Tropical Forest Action Network (JATAN)

Compliance query

303 ACTOR-LEVEL OUTCOMES

Outcome: The outcome dimension refers to the behavior of actors at both the international and the domestic level. Outcomes at the international level include compliance by important members. At the state level, outcomes cover activities of major agencies and actions of those affected by the regime's rules.

FORM: RC5

VARIABLE DESCRIPTION: 303A Does the behavior of important actors generally conform with the provisions of the regime? Did the regime exert a causal influence on these developments?

Provide codes for each element.

Distinguish between regime factors and non-regime factors in assessing the regime's causal influence in this area. Indicate the basis for your judgment (documents, articles or books, interview notes, etc.).

Actor behavior conforms with regime rules when it produces outcomes that fulfill requirements, whether or not it was intentional, whether or not the actor has a legal obligation to do so, and whether or not the regime had a causal impact on the behavior.

If behavior would have been the same without the regime, the regime had no causal impact. If the behavior of actors conformed occasionally or even frequently failed to conform with the regime's rules but conformity with the regime's rules would have been even worse in the absence of the regime, we consider the regime to have had a positive causal influence. If the behavior of actors conformed occasionally or frequently failed to conform with the regime's rules but conformity would have been even better in the absence of the regime, we consider the regime to have had a negative causal influence.

Regime factors are those that stem from the regime's existence. Such factors may include weak or strong rules, mechanisms for technology or financial transfer, etc. that may have positive or negative influences on the achievement of the regime's stated goals. Non-regime factors are those operating outside the regime's environment but not attributable to the regime's existence (e.g., economic recession) that either promote or weaken the achievement of the regime's stated goals.

IMPORTANT_NATION Important nations/states identified in the precoding agreement.

ALL_MEMBERS Provide a general judgement about all members of the re-gime.

NONSTATE Non-state actors identified in the precoding agreement.

CONFORMITY For each important actor listed under IMPORTANT_ NATION, ALL_MEMBERS, or NONSTATE, indicate whether that actor generally conformed with the provisions of the regime rules.

0 = Not applicable (e.g., actor does not need to conform with regime rules)

1 = Behavior exceeds regime requirements: The actor conforms with the regime's rules almost all the time and even exceeds them to a degree that is considered significant or important by regime members (e.g., the behavior of a number of industrialized countries exceeds the rules established under the Montreal Protocol on Substances that Deplete the Ozone Layer 1987 and its revisions in 1990 and 1992).

2 = Behavior meets regime requirements: The actor conforms with the regime's rules almost all the time but does not significantly exceed the regime requirements (e.g., the U.S. and the former Soviet Union conformed with the provisions of several bilateral agreements to reduce nuclear weapons but did not significantly exceed the regime requirements).

3 = Behavior conforms with some requirements but not all: The actor only conforms with some of the regime rules.

4 = Behavior conforms some (but not all) of the time and/or to some degree but not completely: The actor conforms with the regime's rules most of the time but deviates occasionally in such a way that is considered significant or important by regime members (e.g., North Korea's behavior occasionally deviated from the provisions of the Non-Proliferation Treaty) and/or conforms only to some degree in a way that is considered significant or important by regime members.

5 = Behavior does not conform at all: The actor does not conform with the regime's rules to any significant or important degree.

6 = Do not know

CONFORMITY_CAUSAL For each important actor listed under IMPORTANT_ NATION, ALL_MEMBERS, or NONSTATE, indicate whether the regime had a causal influence on the degree of conformance of the actor(s).

0 = Not applicable (e.g., actor does not need to conform with regime rules)

1 = Little or no causal impact: Non-regime factors mainly account for state of the world and regime factors do not play a role.

2 = Modest causal influence: The regime matters with regard to the state of the world but non-regime factors are more important.

3 = Large causal influence: The regime accounts equally with non-regime factors for the state of the world or has proven to be more important with regard to the state of the world than non-regime factors.

4= Negative causal influence: The regime exerted a negative influence toward conformance with requirements.

5 = Do not know

CONFORMITY_

CAUSAL_REFERENCE Indicate the basis for your judgment (documents, articles or books, interview notes, etc.) for each important actor.

UNCERTAIN + COMMENT

Problem change query

304 IMPACTS OF THE REGIME IN THE TARGETED ISSUE AREA

Impact: The impact dimension includes results of the regime's operation within its own issue area. Such results can encompass the regime's contribution to solving the problem(s) that motivated the parties to create it, the regime's contribution to learning about the nature of the problem, or the regime's impacts on the distribution of values.

FORM: RC11

VARIABLE DESCRIPTION: 304A How did the state of the world change during this period with respect to the problems addressed by the regime? Did the regime exert a causal influence on these developments?

Distinguish between regime factors and non-regime factors when assessing the regime's causal influence on these developments. Indicate the basis for your judgment (documents, articles or books, interview notes, etc.).

If the actual state of affairs was somewhat negative or stayed the same but the situation would have been even worse in the absence of the regime, we consider the regime to have had a positive causal influence (e.g., after the creation of the Baltic Sea Regime, conditions failed to improve, but the regime helped prevent deterioration). If the actual state of affairs is somewhat positive but the situation would have been even better in the absence of the regime, we consider the regime to have had a negative causal influence.

Regime factors are factors that stem from the regime's existence. Such factors may include weak or strong rules, mechanisms for technology or financial transfer, etc. that may have positive or negative influences on the achievement of the regime's stated goals. Non-regime factors operate outside the regime's environment and may include developments that are not attributable to the regime's existence (e.g., economic recession) and that either promote or weaken the achievement of the regime's stated goals.

Provide codes for each element.

PROBLEM Problem(s) identified in the precoding agreement.

PROBLEM_CHANGE For each problem listed under PROBLEM, indicate whether and how the state of the world changed during this period with respect to the problem.

0 = Not applicable

1 = The problem worsened considerably: During this period, a considerable change occurred towards (further) deterioration of the problem (e.g., problem of regional arms control: strong one-sided armament puts an aggressive state into the role of a regional power (Nazi Germany in the 1930s) or produces strong arms race with neighboring states).

2 = The problem worsened slightly: During this period, a slight change occurred towards (further) deterioration of the problem (e.g, problem of preventing diffusion of nuclear weapons: The diffusion of nuclear weapons could not be controlled and the number of nuclear powers increased).

3 = The problem stayed the same

4 = The problem improved slightly: During this period, a slight change occurred towards (further) improvement of the problem (e.g., problem of an independent Palestinian state:

In the first half of the 1990s, peace talks among Israel, the Arab states, and the PLO produced some progress with regard to the relationships among the parties).

5 = The problem improved considerably: During this stage, a considerable change occurred with regard to (further) improvement of the problem (e.g., human rights problems between East and West: As a consequence of the dissolution of the former Soviet Empire in Eastern Europe, basic human rights like freedom of speech or association are no longer conflictual issues between East and West).

6 = Do not know

PROBLEM_

CHANGE_CAUSAL For each problem coded under PROBLEM_CHANGE, indicate whether the regime exerted a causal influence on the change of the world with regard to the problem.

0 = Not applicable

1 = Little or no causal impact: Non-regime factors mainly account for state of the world and regime factors do not play a role.

2 = Modest causal influence: The regime matters with regard to the state of the world but non-regime factors are more important.

3= Balanced causal influence: On balance, regime and non-regime factors account equally for the state of the world.

4 = Significant causal influence: The regime has proven to be more important with regard to the state of the world than are non-regime factors.

5 = Very strong causal influence: Regime factors account for virtually all these developments.

6 = Do not know

PROBLEM_

CAUSAL_REFERENCE For each element, indicate a basis for your judgment (documents, articles or books, interview notes, etc.).

UNCERTAIN + COMMENT

Problem malignancy query

1)

FORM: RF7

VARIABLE DESCRIPTION: 101G Regarding interests involved in the issue area: Was there an incentive to disobey the rules even after the regime was put in place?

Provide codes for each element.

PROBLEM Problem(s) identified in the precoding agreement.

INTEREST_DISOBEY Was there an incentive to disobey the rules even after the regime was put in place? Provide codes for each problem mentioned under PROBLEM.

0 = Not applicable

1 = Very strong relevance of incentive to disobey rules even after regime was put in place

2 = Strong relevance of incentive to disobey rules even after regime was put in place

3 = Medium relevance of incentive to disobey rules even after regime was put in place

4 = Low relevance of incentive to disobey rules even after regime was put in place

5 = No relevance of incentive to disobey rules even after regime was put in place

6 = Do not know

UNCERTAIN + COMMENT

2)

FORM: RF9

VARIABLE DESCRIPTION: 101I Regarding interests involved in the issue area: How compatible/incompatible were the interests of the parties?

Provide codes for each element.

PROBLEM Problem(s) identified in the precoding agreement.

INTEREST_

INCOMPATIBILITY How compatible/incompatible were the interests of the parties? Provide codes for each problem mentioned under PROBLEM.

0 = Not applicable

1 = Very strong incompatibility of interests

2 = Strong incompatibility of interests

3 = Minor incompatibility of interests

4 = Minor compatibility of interests

5 = Strong compatibility of interests

6 = Very strong compatibility of interests

7 = Do not know

UNCERTAIN + COMMENT

Depth query

FORM: RA15

VARIABLE DESCRIPTION: 205G Is the regime shallow or deep as measured by the density and specificity of its rules?

Provide codes for each element.

REGIME_SHALLOW Is the regime shallow or deep as measured by the density and specificity of its rules?

1 = Very shallow: Compared to the density of rules considered necessary for managing the problems in the issue area, the regime comprises only a very limited number of rules, and/or established rules are rather weak compared to the specificity of the rules considered necessary for managing the problems in the issue area (e.g. the 1979 Bonn Convention on the Conservation of Migratory Species of Wild Animals is a very shallow regime with a very limited number of weak rules).

2 = Shallow: Between 1 and 3 on the scale.

3 = Medium: Compared to the density of rules considered necessary for managing the problems in the issue area, the regime comprises a sizable number of rules to manage the problem and/or established rules have developed some strength compared to the specificity of the rules considered necessary for managing the problems in the issue area.

4 = Deep: Between 3 and 5 on the scale.

5 = Very deep: Compared to the density of rules considered necessary for managing the problems in the issue area, the regime comprises a very comprehensive set of rules and/or established rules are rather strong compared to the specificity of the rules considered necessary for managing the problems in the issue area [e.g., the adjustments and amendments to the Montreal Protocol (1987) adopted in London (1990) and Copenhagen (1992) led to a rather deep regime with comprehensive and strong rules].

6 = Do not know

Decision rule query

Decision rule FORM: RA32

VARIABLE DESCRIPTION: 210B What decision rules does the regime provide for and use in arriving at decisions?

There is a difference between having written decision rules which are part of the regime's provisions and using decision rules for arriving at these decisions (e.g., the regime's provisions can provide for a qualified majority, whereas in practice states try to arrive at these decisions by consensus).

Provide codes for each element.

DECISION_RULES_ PROVIDED What decision rules does the regime provide for in arriving at

decisions? Code each decision listed under DECISIONS_PROVIDED. For each decision, check as many as apply.

0 = Not applicable 1 = No decision rules 2 = Unanimity 3 = Consensus 4 = Weighted/unweighted voting 5 = Qualified majority 6 = Simple majority 7 = Right to opt-out, file objection 8 = Do not know

DECISION_RULES_ IN_PRACTICE

DECISIONS_PROVIDED UNCERTAIN + COMMENT

What decision rules does the regime use in practice in arriving at decisions? Code each decision listed under DECISIONS_PROVIDED (see codes above).

Formal decisions called for by the constitutive provisions of the regime listed above.

Uncertainty query

FORM: RF22

VARIABLE DESCRIPTION: 104A Was the nature of the problem well understood?

The degree of uncertainty in an issue area depends on consensus regarding the nature, causes, and consequences of the problem, and on consensus about solutions and what should be maximized in the issue area (e.g., whether the actors value protecting fish resources or harvesting a resource to provide food).

Provide codes for each element. PROBLEM Problem(s) identified in the precoding agreement. PROBLEM_UNDERSTAND Was the nature of the problem well understood? Provide

codes for each problem mentioned under PROBLEM.

0 = Not applicable 1 = Very strongly established understanding: There was general consensus regarding nature, causes, and consequences of the problem, as well as regarding solutions and what should be maximized in the issue area. 2 = Strongly established understanding: Between 1 and 3 on the scale. 3 = Partially established understanding: Consensus was partially achieved, either by consensus on some but not all of the different variables (nature, causes, and consequences of the problem as well as solutions and what should be maximized in the issue area) or by generally growing, but still not fully developed, consensus on all of the different variables. 4 = Low established understanding: Between 3 and 5 on the scale. 5 = Not at all established: Understanding was not established with regard to nature, causes, and consequences of the problem, or to solutions or what should be maximized in the issue area. 6 = Do not know.

UNCERTAIN + COMMENT